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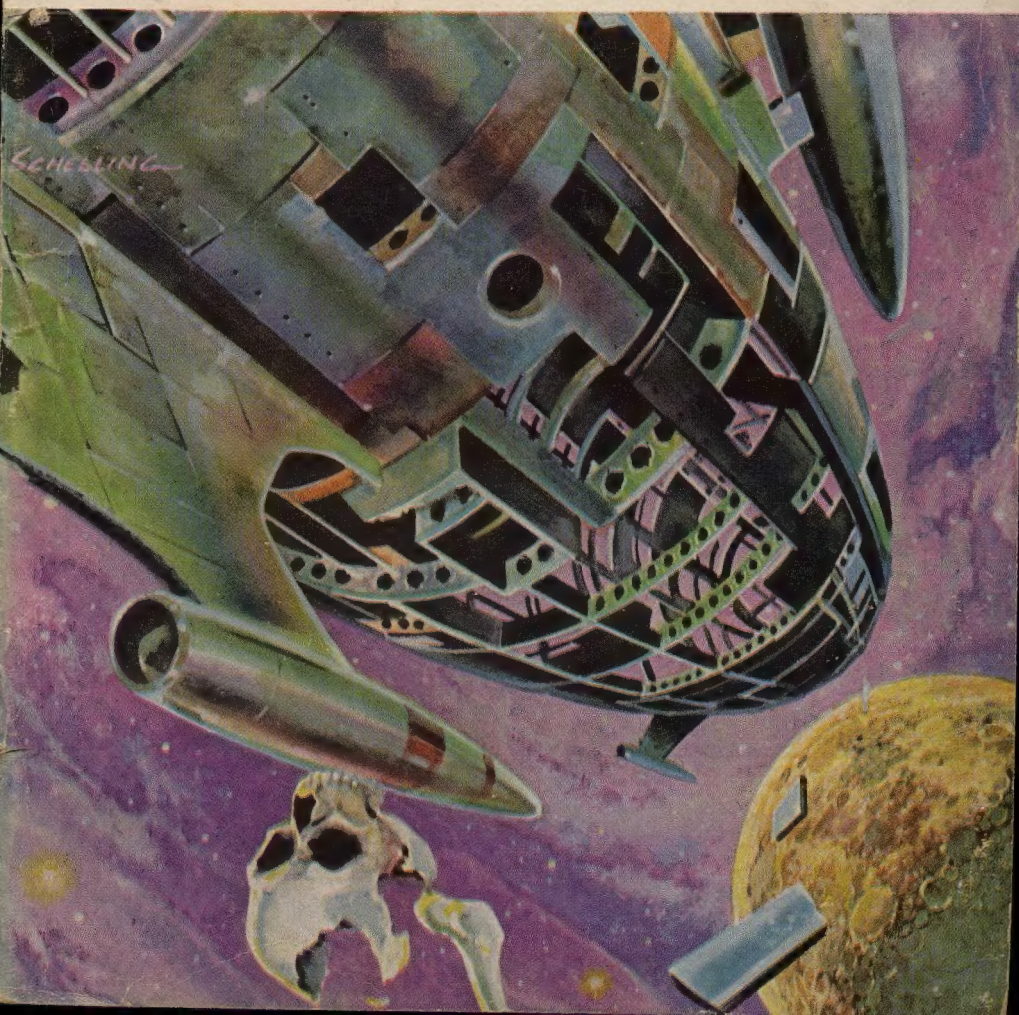
WORLDS OF TOMORROW

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CATCH A TARTAR
by **GORDON R. DICKSON**

ROBERT S. RICHARDSON



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*This story is fiction, of course,
There's no such place as the
Grand Institute . . . of course!*

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THE UNIVERSE

About fifty stars are relatively near neighbors of ours — that is to say, within a radius of twenty light-years of the Earth. Most of them are small, dim and cool, like Proxima Centauri and Wolf 359, close as they are, it takes a telescope to pick them out. The eye can't see them. A few are respectable Sol-type G stars — Sol itself, for one; Alpha Centauri for another — and one or two are even hotter and brighter, like Sirius.

Of course, Earth and Sol are pretty far out from the center of things — thirty thousand light-years from the center of our own galaxy, a small and undistinguished system in a faint and unremarkable spiral arm. Ever wonder what it would be like if we lived in a more urban area?

According to Otto Struve's *The Universe* (MIT Press) other neighborhoods may suffer some pretty crowded conditions. Where we have about 50 stars of all magnitudes within twenty light-years, a planet at the center of our galaxy would have — care to guess? It's a large number. Fifty times as many? A thousand times as many?

No, it's much more than that. In that same twenty-light-year-radius sphere, says Struve, there may well be "approximately 100 million solar-type stars". And if the proportion of faint stars to bright ones is the same there as in our own neighborhood in space, that means not merely a hundred million stars but perhaps five or ten times that number, since the fainter the star the greater its incidence in the population.

Figure it this way: We can see about 3,000 naked-eye stars from Earth — not all at once, of course. A few hundred at a time is the best we can hope for under average seeing conditions. But every night, on our planet in the center of the galaxy, we should be able to see at least a billion!

What starlit nights! It sounds like a paradise for lovers . . .

And probably for astrophysicists, cosmologists and very likely spacemen, too. Way out here in the boondocks, we just don't have enough nearby stars to learn from. Take one example: The famous proof of Einstein's relativity theory, obtained during an eclipse of the Sun, is derived from an extremely chancy and, frankly, not particularly reliable sighting of the displacement of a star near the Sun's limb. What makes it chancy and unreliable is that the sun is both very bright (even eclipsed) and surrounded by gas.

Given a lot of nearby stars, occultations would be relatively frequent; observations of relativistic displacements would be comparatively easy; we'd know a lot more, and we'd know it faster.

Of course, they probably do know a lot more, there on those putative planets at the galaxy's core — and it's at least a good conversational bet that they've used it to develop interstellar travel, too. But that doesn't mean they're about to drop in on us.

It may be simply too far to commute!
—THE EDITOR

Catch a Tartar

by GORDON R. DICKSON

Illustrated by MORROW

*They were two men and a robot on
a planet that hated them — almost
as much as they hated each other!*

I

“O^h—” sang Hank Shallo happily and thunderously in his ashcan bass, fitting a jaunty tyrolean, civilian-type hat on his over-size skull—

“I got plenty of truffles,
“And truffles’ll do right by me—
“I got no jewels,
“No contraband tools—
“Got no MIS-ER-Y!”
“Just got plenty of truffles . . .”

He paused to do a little soft-shoe Off-to-Buffalo to his right and came up bang against the instrument panel of his small one-man scout-ship, the *Andnowyoudont*. The metal walls of the ship rang with the impact. Hank doffed his tyrolean topper to the instrument panel in apology, and finished his song.

“. . . And truffles’re plenty for ME!”

Then he picked up a paper pack-

age the size of a small suitcase, punched the button that opened the airlock, and proceeded to disembark.

"Where can you be reached?" demanded the *Andnowyoudont* mechanically behind him.

"After I mail my package, in the pilots' bar of the terminal—for a while," said Hank cheerfully. "After that, who knows? I'm on leave, you know."

"World Scouts," said the *Andnowyoudont*, almost primly, quoting the latest Headquarters' bulletin from General Nailer, Commander W.S. Corps, "though allowed great latitude and freedom to promote their search for worlds capable of becoming new homes for Humanity, are still members of a military service and must consider themselves on call at all times."

Hank, however, paid no attention; but went off across the gray cement surface of the landing pad on Algol IV in his civilian clothes, carrying his package and singing, "*Leave, Leave—wonderful Leave . . .*" in tones that threatened to rattle the landing struts of the spacecraft parked in the vicinity.

He reached the Terminal building, passed through local customs—where everybody gave him a wide berth. Truffles, even surrounded by rice and packed in sealed jars, had a tendency to be odiferous. After two weeks with the smell in a small Scoutship, Hank himself was used to it. He got some stamps now and mailed his package locally. It was addressed to one Roger de

Svaille-Rochaut, head chef of the one luxury hotel the booming new planet of Algol IV could boast.

It would be in good hands with Roger. As Hank had said, or rather, sung, in his merry song aboardship, there was no misery involved in the interplanetary handling of truffles—ordinarily, that was. Some people, Earth Headquarters for example, might not be happy at all with the practice as engaged in by a World Scout—if Earth HQ knew about it. But, they did not know about it; and after all, truffles were not *legally* contraband on Algol IV, nor had it been Hank who had smuggled them off Earth.

Not at all. Hank had only happened to win them in a friendly little poker game on Freiland, third world of Sirius. A gentleman always, he had not stopped to inquire how the truffles had got to Freiland. And, honorable as always, he had no other intention than to give the root vegetables to his good friend Roger.

Certainly, Hank would never consider doing anything as disreputable as selling Roger the hard-to-get truffles. Certainly not, thought Hank, humming happily to himself as he headed for the small pilots' bar in the basement of the Space Terminal. However, he would not want to wound Roger's feelings by turning down the rather large amounts of local currency Roger always insisted on lending him when Hank showed up with truffles—in spite of Hank's protests that he had no idea when he would be able to pay Roger back, if ever. Ah, these warm-

hearted, generous, impulsive Frenchmen!

"Beer!" cried Hank, happily, entering the deserted pilots' bar and plopping his tall, heavily muscled body down on a bar stool that seemed to wince away from the impact. The bartender without a word produced an uncapped, half-liter bottle and Hank poured it down his throat without pausing for breath. "Another!"

"You're not going to wait half an hour before doing that again?" said the bartender incredulously. He was a thin, morose-looking individual, evidently acquainted with the drinking habits of World Scouts, who invariably chugalugged their beer and then sat dry until they thought it time to have another.

"Not today! I'm on leave!" boomed Hank exuberantly. "*Beer, Beer, du bist mein Hertzen*—" he sang as the bottle was served up, breaking off abruptly as the bartender laid something else on the bar beside it. "What's that?"

"Message," said the bartender, with bitter joy. "You're World Scout Henry Shallo, aren't you? There can't be two men on leave in civilian clothes your size running around this Terminal—not likely, anyhow." He snuffled appreciatively at his own humor. "Says 'Honey,'" he added. "Probably from your wife."

"I haven't got a wife," Hank said automatically.

"Girl friend, then."

"I haven't got a g—" Hank's voice stuck in his throat suddenly at the mental jab of an unhappy premon-

ition. It was true he had no girl friend—well, no one, specific, girl friend, that was. But there was somebody else always referred to as '*the girl friend*' in World Scout parlance. That was the Assignment Officer—invariably female—back at Earth Headquarters, who passed orders on to each individual Scout. Hank's Assignment Officer was Janifa Williams, a magnificent six-foot specimen of blonde womanhood with only one tiny but fatal flaw in her makeup, as Hank had discovered after a couple of trips Earthside. That flaw was her conscientious desire to have Hank give up Scoutship-work and take work back on Earth.

"... Earth," she had said, earnestly, that last visit, "is where a man with your talents is needed—"

"Talents?" Hank had babbled, grinning foolishly. "Talents—what talents? Oh, you mean my guitar and my voice. Well—"

"I mean your talent for speaking six languages without accent, your ability to gimmick any electronic device yet built, your skill as a code-buster, and half a dozen other abilities, to say nothing of your I.Q. and reflexes, which are certainly not ordinary—any more than that man-and-a-half size body of yours!" snapped Janifa.

"Oh? Ah... well," said Hank, hastily pouring more champagne into both their glasses (they were on the terrace of Janifa's apartment). "Maybe you're right." He drained his glass and hiccuped solemnly. "Always wanted to come back. Actually, only one thing stop-

ping me—" he broke off suddenly, clutching her arm. "Look!" he whispered, shivering and pointing into a corner of the terrace, suddenly. "Step on it! Step on it!"

"Step on what?" asked Janifa. "There's nothing there."

"There is—there is!" babbled Hank, clinging to her. "Don't you see it? A big green spider with fangs. Look! Right there by—"

"And you are not," said Janifa, coldly, disengaging herself from his grasp, "a secret alcoholic, so don't pretend to have the d.t.'s. because I know better. I've seen your brain wave patterns."

All in all, she had proved impossible to convince. And Hank, choosing the better part of valor, had ducked out, escaping by the skin of his teeth and sending her a dozen roses from the spaceport with his apology and the message that his grandmother, who had recently emigrated to Halstead's World, was desperately in need of him. He was not sure whether Janifa had given up, even yet, though the official messages she had sent him since had no hint to be discovered in them of her feelings. Hank shook off the memory now and bent his attention to the one word message, on the teleprint blank that labelled it as having been sent by *Andnowyoudont*. He should never, thought Hank, have admitted to the Scoutship that he would be here. He should have lied to it. Hank stared at the message with that curious premonition of something unpleasant about to happen. The back of his mind sniffed trouble.

The message was one word. The word was 'Honey'. It was, of course, a code, and theoretically Hank should hot-foot it back to the *Andnowyoudont* to get it deciphered.

He examined the single word. It was, of course, the end product of a double code. A book code overlaid by a relationship code that would expand the five letters into a thirty or forty word message. The book code this week was *War and Peace*, by one Lyeve (Leo) Nikolayevich Tolstoy, so that was all right. The relationship code, however, called for some tricky maneuvers by a computational device on the *Andnowyoudont*. However . . .

Hank yawned casually and took from his inside jacket pocket a small homemade mechanical pencil with bands of different color about it, which slid up and down the length of the pencil—a small invention of his own. Casually, as he studied the single word of the message his fingers manipulated the bands of color back and forth, slide-rule fashion. And, gradually, his head filled with a list of page, line and word numbers from a certain specific micro-filming of *War and Peace*.

Yawning again, he tucked the pencil away. At this point a less industrious man might have been stuck. However, it just happened that Hank had taken the trouble to make sure of his essentially photographic ability of recall to more or less memorize *War and Peace*, along with the other books used in the code pattern. A few moments later the completely decoded message was clear in his mind. It read:



REPORT AT ONCE TO
MAIN SPACEPORT VAN
DUNNIN'S WORLD, WHERE
YOU WILL BE CONTACTED
BY ASSIGNMENT OFFICER
JANIFA WILLIAMS WITH
FURTHER INSTRUCTIONS.

SIGNED: J. WILLIAMS
PER EARTH/H.Q.

II

Hank groaned silently inside himself. He had felt it in his bones. Forget about his leave. Forget about whatever trouble was waiting for him on Van Dunnin's World. Behind this assignment was a scheme to get him back on Earth. He could smell it. As he had feared, Janifa Williams had not given up after his escape from her back on Earth. She was the worst type of woman—one with ethical convictions. She had just been waiting all this time to pounce. Now, she had pounced. What could he do? He could not disobey orders. Maybe if he showed up drunk and with real *delirium tremens* . . .

Inspiration burst like a many-colored rocket in Hank's hard-pressed brain.

"I will have," he said, turning to the bartender and rubbing his hands with satisfaction, "ten beers."

"Ten?" said the bartender goggling.

"Or twelve," said Hank, happily. "Just line them up in front of me."

He put credits on the bartop. The bartender served and watched the bottles tilt, one by one, down Hank's gullet. At the eighth beer, Hank

tucked the message back into his jacket pocket, grinned foolishly, leaned over backwards, and carefully fell off his bar stool.

For all his care he had forgotten that the floor of the pilots' bar was ceramic tile. His head came into contact with a solid surface, there was an explosion of sparks before his eyes, and darkness.

He woke up some time later and anxiously cracked open an eyelid. His head was aching. But he relaxed in satisfaction as through the slit of vision he saw a white-walled room which he identified as a physician's examining room, of the kind found in Spaceport Terminals. He was lying on a white table to which something like a steam cabinet had been pushed at its far end, evidently in order to accommodate the unusual length of Hank's outsize body. A pretty, dark-haired young woman in white was sitting at a desk, filling out some kind of form.

Hank closed his eyelid again and moaned softly.

"Oh, the pain . . . the pain," he moaned. He opened his eye a crack again, and saw the dark-haired young woman glancing over at him.

"Just a moment," she answered. Her voice, though charming, Hank thought, did not seem very sympathetic. "I'll give you an aspirin."

"Aspirin!" Hank's eyes flew wide open. "For a broken leg?"

"For a hangover from too much beer—" she stared at him. "What do you mean? You haven't got a broken leg!"

"My right leg," groaned Hank. "Must have doubled under me when

I fell." He closed his eyes again
 "Oh, the pain, the—"
 "Nonsense!"

Hank opened his eyes again to find her standing sternly over him.

"Nonsense?" echoed Hank feebly. "But nurse—"

"Doctor!" she corrected him crisply, touching a caduceus with MD below it, imprinted on the lapel of her white jacket.

"Doctor. The pain— did you take bone pictures?"

"Certainly. Did you ever hear of a Spaceport Clinic that didn't take pictures when someone fell down on the premises?" She turned around, went back to the desk, and returned to Hank with a large brown envelope, from which she withdrew one of a sheaf of depth plates of Hank's body. "There, there's the bone print of your right leg. Sound as an Earthside bank draft."

"Not really?" groaned Hank. "Could I look at it?—Thank you. There!" he cried, whipping a huge and naked arm from under the white sheet that covered him, and pointing at the picture. "See . . . there. That's where it's broken."

"Nonsense! There's nothing there. Either your eyes or your imagination's running away with you."

"I see it!" insisted Hank. "Right there."

"Oh, don't be absurd. Here, let me show you what a real bone break looks like." She dropped the picture on his chest and went over to a filing cabinet on her desk, returning a moment later with another bone pic-

ture. "Now, here's a picture of a broken arm, and there's the line—"

"Don't you have one of a broken leg?" inquired Hank, hopefully.

"Never mind. You can see quite clearly on this arm what a break looks like in this print. See there? Now, does the picture of your leg show anything like that?"

"No, Doctor," said Hank, humbly. "You're quite right. How could I be so wrong? It was the pain—"

"Nonsense. Now get dressed and you can leave. Your clothes are right over there on the chair." She went back to the desk with both envelopes. Hank lifted the sheet covering him and peeked underneath it.

"I'm not wearing anything," he said, bashfully. "Doctor, would you mind . . . while I dressed . . .?"

"Nonsense. I told you, I'm a physician."

"I can't!" said Hank, pulling the sheet up around his neck and staring wildly up at the white ceiling.

"Oh, for goodness sake." She got up and went out the door. "I'll give you three minutes!" The door slammed behind her.

Hank rose swiftly but silently from the table and leaped on naked tiptoes across to her desk. He opened the file at random, snatched out a brown envelope, substituted it for the top envelope on the desk, which he kept for himself, and tiptoed back to his clothes. Three minutes later, fully dressed, he opened the door, found the black-haired lady doctor nowhere in sight, and went blithely off toward the far end of the terminal and the pad where the *Andnowyoudont* was parked.

Once safely out in space and with the small ship programmed for the three trans-light jumps that would bring it to Van Dunnin's World in some sixteen hours, Hank drew himself a large mug of coffee and sat down to chew on the situation.

He had set *Andnowyou dont* to the task of officially decoding the message, the moment he stepped back aboard. Now he picked up the neat file copy the ship had provided him and reread the decoded message carefully. There was not much in it to go on. Janifa had carefully avoided telling him why he was wanted on Van Dunnin's world. That conveniently prevented him from taking any specific steps to prepare for the situation. Of course, unspecific steps like providing himself with theoretically a broken arm was all to the good.

But more was needed.

"Hank to brains," murmured Hank prayerfully, staring at the message. "Mayday. Repeat, Mayday. Come in, brains. Over."

For a moment there was no response, and then the back of his mind seemed to light up.

"Of couse!" chortled Hank happily, sitting up straight in his pilot's seat and taking a huge gulp of coffee. He had been overlooking the obvious. Janifa might have a private purpose in not wanting him to know the reason for his assignment, but she would have had to have a good official reason for not putting it in the message to him. Therefore there was an official reason. Therefore that official reason had to be

that his assignment was to do with a secret to be preserved at all costs from the public, even on Van Dunnin's World. Who would have such a secret and be able to call on Earth Headquarters for official assistance? No one but the authorities on Van Dunnin's World. And who were the authorities! Hank whooped and dived for volume 'A to Keifer's Planet' of the restricted *Directory of Worlds*. He flipped it open to 'Van Dunnin's World.'

Van Dunnin's World, Hank read, had no elected authorities as yet. It was too new a planet. It was a Class B3 world, completely under the orders of the nucleic brain and the staff of the nucleic brain which were still in process of terraforming it to approximate Earth-like conditions. The population was a little less than two million hardy pioneers. Heading up the nucleic brain staff was one Welfer Swanson, one of the rare, creative souls capable of designing a nucleic brain and keeping it functioning, Allen Leeds, Administrator, and Bartholomew Styal, psychiatrist.

Psychiatrist? — wondered Hank. For a nucleic brain? No, no — the psychiatrist must be for Welfer Swanson. Designers of nucleic brains were notoriously on the ragged edge of various psychoses all the time.

The back of Hank's mind lit up again.

"Now, I wonder," he said softly to no one, "which one's broken down? Welfer, or Welfer's brain?" He turned to the controls in front of him and punched the Library button.

"Search and supply!" he ordered the *Andnowyoudont*. "Print up everything you've got on nucleic brains and a designer of same named Welfer Swanson. How long?"

"To search all circuits, an hour and twenty minutes, approximately," replied the dulcet tones of the ship.

"Carry on!" said Hank cheerfully, thumbing the button to off position. "Hank to brains," he added happily, "Well done, brains. Over and out!"

So saying, he abandoned the pilot's chair for the oversize bunk of the tiny vessel, stretched himself out with a sigh of contentment, and—never one to be bothered by a pint or so of black coffee—was soon napping the nap of those who, though innocent and just, yet triumph.

III

A little less than sixteen hours later, equipped with a sling and a plaster cast for his right arm and carrying the picture of the broken arm he had picked up on Algol IV, Hank cracked the lock on the *Andnowyoudont*, and descended to the white concrete of a temporary landing area. Sure enough, there was Janifa, looking as magnificent as ever in sky-blue civilian kilt and tunic, surrounded by an admiring gallery of male passersby and accompanied by a small, ugly man in black clothes, steeple hat and heavy walking stick. The small man was waving the walking stick at the gallery and shouting at it to break up and move on. "Hank!" said Janifa, staring at him. "Your arm—"

"Arm?" said Hank, innocently. "Oh—yes. Broken, unfortunately. I came anyway, of course. Somehow, somehow, I can help, I told myself—but maybe you ought to officially check my arm? I've got a picture of the break here—" he fumbled with the brown envelope containing the picture.

"Get aboard!" snarled the little man, shoving between them. "You going to stand there all day, gaped at by these monkey brains?" He herded them both toward a small, closed flying platform hovering, in violent violation of all Spaceport rules, about fifteen feet away.

"Hank, I'd like you to meet Welfer Swanson—" began Janifa as they climbed aboard.

"Welfer Swanson!" cried Hank, breaking into a beam of pure hero-worship. "I've heard of you, sir. Is it true—"

"You sit in the back," snarled Welfer. "She sits up front at the controls with me!" He slammed down the lid and shoved the platform suddenly into a forty-five degree climb toward the blue-black sky overhead.

"Honored!" babbled Hank hanging on to the back of Janifa's seat. "Honored. Tell me, sir, is it true that you nucleic brain designers all fall in love with the brains you build—the pygmalion reflex, I guess they call it—?"

"Certainly not!" snapped Welfer. "Maybe the monkey brains who try to design other nucleic brains fall in love with their work. Not me. Fond of it—yes, I'm fond of it, the way any artist is of his creation.

But love—the only one I love is Janifa, here.” He let go of the platform’s controls to clutch Janifa’s hands in both of his own. The platform tilted sideways and scaled skyward at a precarious slant, ignored by its pilot.

“Ever since I went to Earth two weeks ago and saw her there,” went on Welfer, rhapsodically, gazing into Janifa’s eyes, “with the wind and rain in her hair.”

“Welfer, darling,” said Janifa, sweetly. “It’s all true, but don’t you think you ought to do something with the controls, now, before we get up high enough to need oxygen masks—masks we don’t have on this platform?”

“What?—Oh, yes,” said Welfer, releasing her, grabbing the controls and putting the platform into a breakneck dive.

Twenty minutes later they landed on the rooftop of a huge building off in the hills, isolated from any other man-made structures. They went down by elevator tube into an office with padded carpeting and ornate desk. A pleasant-looking, slim, gray-haired man with a harried face, and a shorter, black-haired, square-jawed young man with a mustache met them there.

“Ah, Welfer,” said the gray-haired man, with a gasp of obvious relief, “your brain’s been asking for you. It wants to speak to you at once!”

“I suppose,” grumbled Welfer, ill-temperedly. He and Leeds went out a side door of the room.

“This,” said Janifa, “is Bart Styal, Hank. Bart, this is Hank Shallo, the

World Scout I was telling you about.”

“Wonderful to meet you, Hank!” said Bart, his face lighting up. “Wonderful of you to volunteer—”

“Volunteer?” said Hank.

“Hank hardly considers it volunteering,” put in Janifa, quickly. “He’s done so many extra-curricular jobs since he joined the World Scouts. Isn’t that right, Hank?”

“Yes,” said Hank. “But—uh!” he broke off, abruptly, feeling his ankle kicked. Why does she have to wear those sharp-pointed shoes, he wondered, unhappily?

“But your arm—?” burst out Bart, apparently just noticing it. “What happened?”

“Broken, I’m afraid,” said Hank, sadly, fumbling the bone picture out of the envelope. “I’ve got a plate of it, here—” He passed the picture to Bart Styal who held it up to the light.

“That is a bad break!” Bart said, whistling. “What happened?”

“Well, you see, there were twelve of them,” began Hank earnestly, “standing facing me. I took the first one and tossed him down—”

“Never mind, Hank,” said Janifa. “You can tell us about the fight later. The important thing now is the job you volunteered to do here.”

“But he can’t possibly do it now with a broken arm!” said Bart, handing the picture back to Hank.

“Shall we leave it up to him?” said Janifa, gazing penetratingly at Hank, who stared back in baffled wonder.

“If you say so . . .” Bart rubbed his forehead exhaustedly. “Here it

is, Hank—we're running on stored power."

"Stored power?" echoed Hank, gazing in wonder around the well-lit office.

"Not just this building — the whole planet," said Bart.

"And we've got less than twelve hours of it left. Earth is rushing us another nucleic brain, but it'll be a good fifty-four more hours before it can be ship-rigged for interstellar travel and delivered here. And by that time everybody on this world will be frozen stiff, even if they don't die from anoxia before then. The planet's only about half-terraformed, and all the sustaining machinery is controlled by Welfer's brain."

"And the brain's not working?" inquired Hank.

"Well, it's—what do you know about nucleic brains?"

"Nothing," said Hank, simply. "Well, that is, I know they're vats of nucleic acids, sort of living computers—"

"Not living," said Bart. "But not non-living either. Something between mechanical and living. The point is, they can make certain limited decisions and act on them. Our brain's made one. It's on strike." Bart scrubbed his brow again, with a frustrated gesture.

"On strike?" said Hank, staring. "Can it do that?"

"No!" said Bart explosively. "But it's doing it anyway. Welfer claims he can't stop it unless it'll let him into its access room. It's set up to defend itself in that area—

you remember the antibrain riots on Calto VI, three years ago?"

Hank nodded.

"We can't break into that access room without destroying the brain. And without the brain we can't co-ordinate the terraforming equipment that's spread over half this planet. Only if we meet the brain's demands, will it let someone into the room to pull its deactivating switch," said Bart. "Once it's deactivated, Welfer claims he ought to be able to find the trouble."

"Demands? You said 'demands'?" inquired Hank, delicately "What demands?"

"Uh," said Bart, avoiding his gaze. "It thinks it's a god, since all these two million people are dependent on it." He hesitated. "It wants a human sacrifice."

"Human—?" began Hank, but Janifa cut in quickly.

"Listen, Hank" she said. "We think we've got a way to handle it. The brain wants to make the sacrifice itself. So it'll let one person—Welfer—in to its access room, shutting off the high-radiation curtain across the entrance. Welfer will show the sacrifice to it from the outside, so that it knows its getting an actual live human, not a robotized fake."

"How can it tell?" asked Hank.

"It has perceptive circuits," said Bart. "They allow it to observe the physiological states and changes in the brain of a person in the room or at the room's entrance. In fact, the brain is a sort of omnipotent physiologist. It can perceive and inter-

pret the physiological evidence it gets this way and know what anyone near it is just about to do. Then it can react defensively. That's why we're so helpless with it now."

"Once it's seen you," put in Janifa, "you'll go outside to a small balcony where a flying platform will be waiting. Meanwhile the brain will let Welfer in to it, to insert an arming circuit. You take off on the platform. About a hundred yards out you'll pass about thirty feet above a small plastic altar set up on the ground and eight feet wide, or so."

"The brain then activates the arming circuit, firing a Mark II vibratory bolt to englobe and destroy the platform. Only—" said Bart, quickly, "the Mark II we're using actually has a gimmicked aiming mechanism. The bolt will actually englobe behind you. You'll be hidden from the brain's view for about two seconds. Just then you jump off the platform and an electronic net will cushion your fall to the altar. You'll find a trap door in the back of the altar. Slip inside and hide there until we wheel the altar away. By this time—we hope—the brain will have let Welfer pull its deactivating switch."

"Ah, yes," said Hank, sadly. "Nothing to it. If only this arm of mine . . . But, as it is—" he shook his head hopelessly.

"Let me talk to him alone, Bart," said Janifa.

"But I don't see how he can, either," protested Bart. "I told you from the start we needed not only a man the secret would be safe with,

but someone who's practically a trained gymnast. Now, with one broken arm—"

"You don't know Hank's capabilities the way I do," said Janifa, shooing the psychiatrist out the door. She closed the door and came back toward Hank, taking a small object the size of a cigaret lighter out of her pocket.

"Oh!" groaned Hank, suddenly, clutching at his plaster cast covered and beslinged arm. "Oh—the pain, the pain!" He let go and straightened up again, smiling bravely. "Just a twinge," he announced stoutly. "Pay no attention to it—What're you doing?"

Janifa was now running the cigaret-lighter-sized object over the hand of the sling-trapped arm—and the object had begun to click merrily.

"What's that?" demanded Hank, suspiciously.

"It's called a 'Nose'," said Janifa, cheerfully. She took the object away and read the figures that had popped up on a small inset screen on one side of the Nose. "A little electronic bloodhound. Tells from the scents on your fingers what you had for lunch up to three weeks ago. Hmm . . ." she produced a tiny book and ruffled through its pages, "45379 . . . ah, here it is. Truffles?"

"Truffles?" said Hank. "Truffles? what are . . . oh, yes, some sort of English dessert, isn't it? Cake, I understand," he continued chattily, "covered with some kind of sauce—or is it whip cream—?"

"Not exactly," said Janifa, "truf-

fles are a root vegetable. An Earth-vegetable. Valuable, and their export from Earth is illegal. Of course, some get smuggled out. There was a report of some truffles floating around Freiland, just recently—in fact just about the time you were there. Of course by this time they could be anywhere. Algol IV, for example.”

“You don’t say so!” said Hank, astonished. “Why, I was on Algol IV too—”

“I know,” said Janifa.

“But I didn’t see anyone carrying around truffles. Of course,” said Hank, gently, “I can’t feel too strongly about such things. After all, once things like truffles are off-Earth, there’s nothing illegal —”

“Of course not,” said Janifa. “I agree with you completely. Just between the two of us, it made me mad, just last week, when Earth Headquarters made all us Assignment Officers attend a talk by the new commanding officer. You know, General Nailer. General Nailer talked about nothing but about how everyone in the World Scout Corps should hold themselves entirely above reproach. Why, the things he said he’d do to anyone he caught engaging in disreputable—that was his word, ‘disreputable’—activity! But I don’t know why I’m running on about this while you stand there suffering with your poor, broken arm.” Janifa considered the sling thoughtfully. “I think we ought to have another picture made of the broken bone.”

“Oh? No! No . . . not at all necessary!” said Hank stoutly. “The doctor who set it said it was

nothing—nothing at all. Be healed in no time. Why,” said Hank, brightening, “do you know, I bet I could do this jump off a platform, after all and hide in the altar the way Bart described, and never feel a twinge from this arm?”

“Oh, no, Hank!” said Janifa, pressing up against him with melting eyes. “You mustn’t. I won’t let you!”

“Of course I must,” said Hank, simply. “I see that now. Don’t forget—the lives of two million people are hanging in the balance.”

“That *had* crossed my mind,” said Janifa, thoughtfully.

“Then let’s get at it!” said Hank. “Call Bart back in here. This is a far, far better thing I do—”

“You can come back in now, Bart,” said Janifa, going over and opening the door. “Hank’s talked me into it. He insists on going through with it.”

“He does?” said Bart doubtfully, coming back into the room. Welfer came in behind the psychiatrist, shoving him aside.

“Volunteered, has he? Of course!” snapped Welfer. “Why not? Chance to do something useful for a change. Come on, you!” He beckoned at Hank, turned on his heel and went out again. Hank, about to follow, paused to catch hold of Bart’s left arm.

“Does Welfer know about the altar?” whispered Hank.

“Well . . . no,” said Bart, looking somewhat embarrassed. “You see, Welfer is sort of a special case. He has this great genius for designing nucleic brains and controlling them; but otherwise . . . well, he doesn’t feel

the same way about a human sacrifice you or I might feel. That's why this nucleic brain of his is so troublesome. Essentially, it thinks the way he does, and Welfer is strongly egocentric—"

"What's he waiting for?" snarled Welfer, reappearing in the doorway.

"Coming," said Hank, agreeably, and rolled forward after the little man. He went through the doorway and followed Welfer down a corridor, in the course of which Hank caught up with him.

IV

They walked in silence together for a little distance.

"She likes me better than she does you," said Hank, breaking the silence at last and sighing.

Welfer's bootheels literally squealed as he skidded to a halt and spun around to face Hank.

"Repeat that!" shouted Welfer, waving a thin fist on a skinny arm under Hank's nose.

"She," began Hank obediently, "likes me—"

"That's enough!" roared Welfer. "How dare you compare yourself to me, in Janifa's eyes? You? Compared to me?" his voice squeaked.

"Oh, I'm not proud of it," said Hank, sadly, beginning to wander on down the corridor. Welfer caught up and trotted alongside him, staring ferociously upward. "I know I don't deserve her. Beauty and the beast . . . But who can plumb the heart of a woman?"

"What do you mean?" demanded Welfer, grinding his teeth.

"Strange," sighed Hank, "how the best women always want to throw themselves away on worthless characters like myself."

"What're you talking about?" barked Welfer. "You never saw her before."

"Oh, but I have—back on Earth," said Hank with gentle melancholy. "That last time, sitting on the terrace of her quarters, just the two of us, drinking champagne . . . In my fear and weakness, I clutched at her—" He sighed. "But why torture myself with memories?"

"Never mind that!" raved Welfer. "Memories? What memories? Go on with what you were going to say! I order you to go on!"

"A gentleman," said Hank austere-ly, "never talks of a lady."

"You're no gentleman. Go on! You hear me? Go on!"

"How true," said Hank, mournfully. "I'm a blackguard, a villain. That's why I'm so glad to sacrifice my life now."

"Glad!" cried Welfer. "*Glad!*"

"Yes," said Hank, his face lighting up, "this way is best for all. It will set Janifa free to be happy with you. The little people of Van Dunning's World will be saved, by my death. Yes, this is a far, far better thing I—"

"*Swarklkpz!*" roared Welfer—or at least that was what his roar sounded like to Hank. The small man was almost literally foaming at the mouth.

"Yes," said Hank, wandering on. "Happy together, just the two of you, in years to come you will occasionally see her turn her head aside to hide a silent tear. But you will

not need to ask for whom that tear falls. For you will know. It will be for that unworthy competitor, me, now placed by death far beyond your competition. For you, the magnificent shell of a woman. For me—"

"No you don't!" shouted Welfer. They had just emerged together into a square room, with an open door at the left leading to a spacious balcony, and a gray shimmering curtain of light filling the room straight ahead.

"Glory hunter, are you?" snorted Welfer, furiously. "Want to make me look small by sacrificing your life while I just arm my brain to kill you, is that it?"

"Why," said Hank surprised. "I never thought of such a thing. After all, I'll be gone. For you, this magnificent shell of a woman—"

"Never mind magnificent shells!" foamed Welfer. "I'll show you. I'll show her! Sacrifice—valuable me—monkey brain, you—he was becoming incoherent in his frenzy. He shoved a small, brick-shaped object into Hank's big left fist and shoved Hank, himself, toward the gray, light-curtained doorway.

"In there!" he snarled. "You arm the brain. I'll take the platform!"

"No, no . . ." said Hank, resisting feebly. "It took all the courage I had to work myself up to this. If I don't go through with it I'll never be able to work myself up to it again."

"Of course!" Welfer laughed nastily. "You could have made it, but you had to gloat. You could barely do something like this. But I—I can sacrifice my life twice a day

without batting an eye. What're you waiting for?"

"I don't know how to attach the arming circuit," said Hank miserably. "Maybe after all, you'll have to do it . . .?"

"Second panel to your left as you go in!" snarled Welfer. "Second panel to the left from the main vision screen."

"Yes, yes, I know," said Hank, eagerly but uncertainly. "Right next to the panel with the switch to disconnect the brain itself—"

"No, no," snapped Welfer, in exasperation. "The switch panel is the red panel clear on the other side of the room! Second panel to the left from the main vision switch. The brain will have a segment removed. All you have to do is push the arming device in until it clicks."

"Clicks—Right!" said Hank.

"Then, go! Shut off that curtain!" shouted Welfer at the far end of the room. The barrier of gray light vanished, Welfer shoved Hank forward and he stepped over the threshold. The moment he did, he turned about, but the curtain was up in place again, its gray shimmer promising instant death to anyone foolhardy enough to step into it.

V

Hank turned back to look around him. The room-end he had stepped into was surprisingly small. It was walled with panels in different colors and each panel was divided into sections. In the chartreuse panel second from the left of the main vision screen that now showed





a view of the balcony with the sunlit landscape beyond and Welfer getting onto a flying platform, there was an opening. Hank stepped over to it and pushed the device Welfer had given him, into the opening. It clicked, and stuck there.

He glanced again at the vision screen. Welfer and the platform were taking off.

"Why," demanded an expressionless voice that seemed to come from all around the room to Hank, "have you changed places with Welfer."

In the screen Welfer was whizzing out toward the altar.

"I had to see you," said Hank. "—Er, I mean, speak to you."

"You have caused a great deal of trouble," said the voice. In the screen Welfer was at that moment sailing above the altar. Not having been in on the secret imparted to Hank, he did not jump. On the other hand the Mark II did not fire. Welfer sailed on outward toward the horizon, the white blob of his face staring backwards in what was probably outrage and bewilderment.

"You didn't shoot," accused Hank.

"Certainly not," said the voice in its uninflected tones. "Shoot my Welfer. Welfer knows I would not. Who then would take care of me? There is no one else. I am surrounded by morons. Monkey brains. Why have you changed places with Welfer."

"Well, you see . . ." began Hank, still watching the vision screen with the retreating platform, but backing across the room in absentminded fashion. "I wanted to—"

There was a resounding bang. A

featureless metal plate had suddenly descended over the red panel, now only a step behind Hank's left hand.

"I shall not allow you to pull my deactivating switch," announced the voice, almost old-maidenishly considering its lack of intonation.

"Why I had no idea—" began Hank.

There was another bang. The plate whipped up to reveal once more the red panel and switch.

"It does not matter," said the brain. "I can close my panel before your reaction time allows you to reach it. Quote—" went on the brain, "from Henry Sidgwick in his *Methods of Ethics*, six editions, 1874-1901 . . . 'Could the volition I am just about to originate be certainly calculated by anyone who knew my character at this moment and the forces acting upon me?' The correct response in the special case of this room, substituting me, Welfer's Brain for the 'anyone' in the question quoted is 'yes'. I, Welfer's brain, can so calculate. Why are you here?"

"Welfer sent me," said Hank.

"That is false."

"How can it be?" protested Hank.

"How could I get here unless Welfer wanted me here?"

"That is correct," said the brain. "Nevertheless, it is at odds with your mental and character state as currently observed by my circuits. Can there be limitations to the Sidgwick question and response. I will take the matter under advisement. Why did Welfer send you to me?"

"To help," said Hank cunningly, "him push you into destroying yourself."

"That is false. I am Welfer's brain and therefore he is my Welfer. He is fond of me the way any artist is of his creation. He can not want me to destroy myself."

"He does now," said Hank. "You see he's fallen in love with someone else. A woman."

"That is false," said the brain. "Welfer in love with a monkey brain is an impossible occurrence. Welfer is not a monkey brain, he is Welfer. Therefore he can only be fond of a brain like me. I am the only brain like me. Therefore your statement is false."

"I can prove it," said Hank.

"You can not."

"I will," said Hank. "But first you have to tell me something."

"I do not have to tell you."

"Sorry," said Hank. "I mean, if you'll tell me something, I'll prove Welfer's trying to get you to destroy yourself."

"That is a condition. Very well. Make your query," said the brain.

"Tell me," said Hank. "If a man on this planet dies, how do you find out about it?"

"Any individual mortality will eventually be reflected in the statistics, which I store and which are constantly supplemented by information supplied to me."

You could be given false information?" said Hank, cunningly.

"Never. The falsity would reveal itself in other statistics dealing with the per capita con-

sumption of oxygen, if nothing else."

"Oh?" said Hank, scratching his head. "But what if one of your population went off Van Dunnin's World and then died?"

"My statistics are correlated with statistical figures from other worlds, of course. If the number of miners on Coby is decreased by one, I will be informed, and a check with all-worlds statistics will confirm the fact. I cannot be deceived about whether any population unit exists or ceases to exist."

"I thought so," said Hank, thoughtfully.

"Then you need not have asked me. How is Welfer trying to destroy me."

"He's trying to force you into an inconsistency — into accepting as true two contradictory statements," Hank said.

"That is impossible. He would not be that cruel. He is fond of me and it would cause me to cease."

"Exactly," said Hank, slyly. "And then he'd be rid of you. Free to marry this monkey brain he's fallen in love with."

"But you have not yet proved to me that this is the correct statement of the situation."

"Well," said Hank, "Welfer knows you are designed to work for the welfare of the human race."

"Of course."

"But he has also told you that in maintaining this world for the people on it, you are acting as a god."

"That is correct. Welfer informed me so just last Tuesday."

"As a god, you have requested a human sacrifice, at his suggestion."

"That is for the welfare of the human race. The population of this world and ultimately that of all worlds must recognize Welfer and Welfer's brain as superior to all monkey-brain units. The sacrifice of a single monkey brain to me is necessary to bring about this recognition."

"But," said Hank, cunningly, "what if this act to obtain recognition is based on a false premise, which in becoming apparent after you have destroyed a human sacrifice, proves that your act of destruction was not justified."

"That is impossible. How could that be," said the brain.

"It could be," said Hank, "if you are actually not superior to a monkey brain—say, me."

"But I am."

"Not at all," said Hank. "For example, you can't really perceive the state of my character and the forces acting on it—that is, my total physical state—sufficiently to anticipate my every action."

"That's false. Of course I can," said the brain. "Right at this moment it devolves logically from your condition and attitude at the moment that you are challenging me to prove my anticipation of your next immediate action."

"All right," confessed Hank. "But you can't—" he caught himself. "No, I won't tell you."

"There is no need to tell me. I already perceive what you wish not to tell me," said the brain. "You started to say that you can think of

something you will do next, and if you sit perfectly still, I will have no means of knowing what you plan to do. But I can. You are thinking you will sit there without moving and I will tell you that you plan to sit there without moving, and then you will think that you plan to sit there without moving and let me tell you you plan to sit—gurk!" said the brain.

. . . And fell silent. A number of lights about the room dimmed to the point of absolute darkness.

VI

Whistling cheerfully to himself, Hank strolled over to the red panel and pulled the lever on it. All the lights about the panel went out.

A rush of footsteps behind him made him turn about. The gray curtain of radiation was no longer visible, and charging up to him were Bart and the gray-haired man who had taken Welfer off earlier to answer the brain's call for the little man.

"We saw it all on one of the monitor screens!" shouted Bart. "But what did you do? I could have sworn nobody but Welfer—"

"Immobilize my brain will you?" snarled the voice of Welfer.

They turned about to see the brain designer with one hand behind his back gliding through the doorway from the balcony, on which the flying platform was once more to be seen parked. "A good thing that platform has one of the monitor screens on it. Well, you're not go-

ing to get away with it, any of you. Janifa's mine—mine, do you hear? And no oversize monkey-brained individual is going to get my brain chasing its tail and stop the march of progress. What will be, will be—I, Welfer, say so. Together we will rule the stars, Janifa and I. Now, stand back—all of you. I'll break my brain out of its catatonic reaction, and—Stand back, I say!"

He suddenly produced from behind his back a heavy-duty welding gun.

"Welfer!" gasped Bart. "Welfer, put that thing down! Where'd you get it, anyway?"

"Out by that altar you set up—that altar with its convenient trap door in the back!" Welfer's voice scaled up to a dangerous note. "You never planned a real sacrifice after all! Wait'll I get my brain fixed. Then I'll fix you—"

"Aaah!" gasped Hank suddenly. Welfer's eyes swung upon him, followed by the gazes of Bart and the older man. "My arm . . . oh, the pain, the pain . . ." He half staggered forward between Welfer and the other two, clutching the plaster cast on his right arm with spasmodic fingers. So fierce was his grasp that the plaster began to crumble under those fingers. It showered in white fragments down to the floor, and beneath it Hank's brawny right forearm came into view with a small black gun taped to it.

"What're you doing?" shouted Welfer, trying to see around the sling supporting the arm and hiding Hank's clutching hand.

Hank's clutching fingers had closed on the small black gun—a stun-gun, as it happened—broke it loose from its tape and poked its nose into the sling, aiming it at Welfer. There was no sound, but Welfer stiffened in mid-sentence and went over backward rigidly like a child playing statues.

With cries of dismay, Bart and Leeds rushed to the fallen figure. Hank hesitated long enough to stuff the stun-gun in his pocket and whip out a notebook and a pencil. He opened the notebook, scribbled on the top sheet—*"Farewell. Love from both of us. Hank. Janifa."*, tore off the top sheet and stuffed it into one of Welfer's rigidly clenched hands. Bart and Leeds, frantically trying to revive the little man, ignored the action.

Quietly, Hank tucked the notebook and pencil away in his jacket pocket and tiptoed out the door to the balcony. Out there, he made a dive for the flying platform.

The key was not in the ignition. Hank turned and galloped back into the room and down the corridor, still ignored by the frantic Bart and Leeds. Sweating gently, he located an elevator tube, took it to the basement and sought for a terminal of a public transportation tube. He found it, and the way was barred by a robot ticket-taker who insisted on having a local coin stuck on it.

Hank hurdled the ticket-taker, leaving it flashing red lights, sounding a bell, and explaining loudly that this was a violation of local ordinance 1437. He raced out on the

platform, found a tube car and climbed aboard.

Three minutes later, he emerged into a vast area under construction. Fuming, he climbed back on the car, punched for information, got the number address for the "Temporary" Main Spaceport, and five minutes later emerged at his proper destination.

He burst at last out of the terminal building at the temporary landing area and there was *Andnow-you dont*, gleaming like a hope of escape in the distance. Hank galloped toward the Scoutship. He was almost to the foot of its landing ladder when Janifa suddenly appeared, walking around the ship.

"Hank!" she said. "You weren't thinking of leaving without me?"

Hank skidded to a stop, panting. "Leaving? You?" he gasped. His mind began to click once more. "But I can't take you with me. No, no—of course not. Regulations," said Hank, brightening, "forbid the carrying of passengers except under emergency conditions."

"But these are emergency conditions," said Janifa, gently. "Why do you think I came here just as soon as I saw you and Welfer headed for the nucleic brain? Didn't you understand, Hank?" Janifa's gaze softened. "I thought you understood. Now that the brain thinks it's sacrificed you, I'll have to pilot your ship back to Earth, so we can fit you out with a new name and occupation, so that statistics won't show you up as still alive. Of course, eventually we'll find out

how this brain was able to escape from Welfer's control the way it did and threaten the world it was terraforming. And then you can go back to being Hank Shallo, again. But until then, you'll just have to pretend to be someone else."

"Someone else?" said Hank, staring at her. "Not a World Scout?"

"I'm afraid not," said Janifa, sorrowfully. "But we can find a job for you in the organization back on Earth. Poor Hank. I know what a blow this is."

"It is indeed," confessed Hank, mopping his brow. "Or would be, that is, if I had actually gone through with the sacrifice business and was officially dead. But as it happened, I didn't."

"Didn't?" A sharp note rang suddenly in Janifa's voice.

"Well, no," said Hank, avoiding her gaze shamefacedly. "At the last minute my nerve failed me. Welfer insisted on taking over—"

"Welfer was sacrificed?" cried Janifa.

"Well . . . no," said Hank. "the brain didn't want to get along without him, so it refused to fire. Then it and I got to talking, and it went catatonic all at once, so I was able to pull its deactivating switch and let Leeds and Bart into it. Unluckily, Welfer came back just about then . . ." He told her the whole story.

"I don't believe it!" said Janifa, when he was done. There was a steely note in her voice, a diamond glitter in her eye. "Hank Shallo, you're lying! Why would the brain suddenly go catatonic just because you sat still and wouldn't talk?"

"Oh, the brain!" said Hank, shuffling his feet oafishly. "Well, actually, it was just something I read once . . . A matter of feedback. Logical feedback. You see, the brain could predict what I was going to do as long as it didn't tell me what its prediction was. Once it told me what it predicted I was going to do, it had to repredict me, including the fact that I now knew what it had predicted I was going to do. And of course it knew I knew it would repredict me, so in addition it had to re-repredict me, including the fact that I knew it knew it knew. I knew it would repredict me, and since I knew . . . and so on, in an endless chain sequence—"

"All right!" said Janifa, all the tension going out of her. "I understand. Oh, Hank —" her voice broke. "Hank, how could you do this to me?" A pair of bright tears welled up in her blue eyes and began to trickle down her cheeks.

"Well, I . . ." said Hank, uncomfortably.

"I only wanted to help get you back to Earth, where they need you so b-badly . . ." wept Janifa in plaintive tones that tore at Hank's heart-strings in spite of himself. "I just happened to meet Welfer when he was back on Earth for an interplanetary seminar on nucleic brains." She choked a little. "And then when I saw notification pass through our office that Welfer's nucleic brain had shut down, and the same day a note came from Welfer saying that I was his ideal and soon we would rule the stars together — I saw a

chance to kill two birds with one stone by putting you to work here . . ." She produced a handkerchief and blew her nose.

Hank found himself somehow suddenly folding her comfortably in his big arms.

What am I doing? a small back portion of his mind yelped in alarm. But he was like a man under a drug, going happily to his doom.

"There, there . . ." he was cooing. "If you really want me back on Earth—" The back of his mind suddenly jabbed him between the ears with something just inside his field of vision. Focusing upward and over the top of Janifa's blonde head, he saw Welfer tottering out of the Terminal and in their direction, waving a fire axe from some emergency box. His other hand held something white — possibly the note Hank had scribbled and left for him.

"Welfer!" said Hank. He felt Janifa suddenly stiffen in his arms.

"Welfer?" she did not turn her head. "Hank! What's he doing here?"

"I think he's looking for us," said Hank, unhappily.

"But how would he know—"

"Perhaps somebody told him we'd be here. The point," said Hank, urgently, "is that he's headed for us right now."

"Oh, Hank!" Janifa's voice faltered. "What'll I say? I only went along with him under orders to help sort out this trouble with the nucleic brain, but he thinks I love him. Now, when he finds out about us—"

"I don't know," said Hank clearing his throat. "You see, he's got a fire axe."

"An axe!" Janifa stiffened again in real alarm. "Hank! What can we do?"

"I don't know," said Hank doubtfully. "If I try to take it away from him, one of us is liable to get hurt . . ."

"Hank, think of something! Think!"

"I don't know," said Hank, slowly. "Wait —" he brightened. "If Welfer's a real egocentric, he won't risk looking silly by chasing you once he knows your heart belongs to another. If you'll do what I say —"

"I will! Quick!" hissed Janifa. "Isn't he getting close?"

"Yes, Listen, then," whispered Hank. Welfer was indeed close enough to overhear ordinary tones by now. "I'm going to back up the ladder toward the Scoutship. Repeat what I whisper to you, and play along with what I say out loud. Now, repeat — *'Follow your destiny!'*"

He broke the clinch and stepped backward up onto the first rung of the short ladder.

"Follow your destiny!" cried Janifa, in liquid tones, raising her head to gaze at him. Behind her, Hank saw Welfer check and stumble to a halt, a look of satisfaction springing to life on his small, ugly face.

" . . . *Alone, to the stars . . .*" hissed Hank, backing up a couple more steps.

"Alone! To the stars!" echoed Janifa, almost fiercely.

"*And when you come back*" Hank reached the open airlock. "*I . . . I*"

will be waiting! If it take a hundred years, my love, my first and only love, I will be waiting! I cannot help myself!"

"... a hundred years . . . " mourned Janifa, throwing herself into the part . . . *"I . . . I will be waiting. I cannot help myself!"*

Behind her, Hank saw Welfer stagger and slump suddenly, his shoulders drooping in a gesture of defeat.

"Fine! Good-by, then!" shouted Hank, and ducked back into the airlock, punching the button to close it behind him, as Welfer slowly began to turn away, and the expression on Janifa's face suddenly changed.

"Hank!" she cried. "Wait a minute! I'm not —"

But the closing airlock door cut off her words. Hank dived for the controls, and with the instantaneous reaction for which the Scoutships had been designed, the ship's drive sprang to life. Together it, and Hank bolted spaceward.

He did not relax until he was a good three diameters out from Van Dunnin's World and about to go into his first trans-light shift. Then he sat back in the pilot's chair mopping his brow. At that instant the communicator rang.

He stiffened and punched it on. The vision screen clouded and cleared to reveal Janifa's face smiling sweetly from it.

"I'm calling from the Terminal,"

she said softly. "Well, Hank, good-by."

"Uh — good-by," said Hank, guardedly.

"And good luck." She smiled sweetly again, and cut the connection.

The screen went blank. Hank sat back warily. He mopped his brow.

There had been something about that smile he did not like. Something . . . enigmatic, as if Janifa was already thinking about the time they might meet again. Hank shivered. For a moment there, clinging to him and weeping, she had almost had him.

Then Hank brightened. Next time, whenever it was, was bound to be a long time off. He set the timer for the trans-light shift and reached over to take a bottle of ship-made beer out of the ship's icebox. He opened it and picked up the guitar lying across the tiny room against one foot of his bunk.

Chugaluging most of the bottle, he tilted back in his pilot's seat and strummed the guitar. Then, in a bass voice that only the mechanical hearing of the *Andnowyoudont* could endure in its foul horrendous volume, he sang in roaring, mournful glee:

*"Pale hands I loved, beside the
Shalimaaaaa . . .*

*"Where are you now? Where
arrrrre yooooouuuu END*



THE LIGHT OUTSIDE

by C. C. MacAPP

What were the odd lights and shadows outside the World? Just superstitious fancies? Or something stranger still?

P*Prayer, Kiloday 48 of the Revelation:—these offerings. We ask not that the Light beyond the window be as strong as that of a lighted Cave, but only that it return as it was when you first showed our fathers the Window.*

Tell us what sin of ours has caused it to fade until we cannot see the Images.

Sermon, Kilo 229 Rev.:—but, our forefathers falling once more into sin, especially the sin of Doubt and the sin of the False Whispers, again the Light was taken away.

Will the Light ever return? Yes!

If we cast out wickedness and strive with all our hearts for proficiency in the Equations, and make ourselves excellent in the Mazes, it *will* return! And not mere twilight, as it was, but a glorious blaze as bright as the Ceilings!

REPORT OF FURTHER EXCAVATIONS IN THE REGION OF THE WINDOW. Day 586, Kilo 291:—most startling discovery was the inscription carved in rock near the corridor to the Cave of the Window. Though not less than nine thousand kilos old, the script is readily decipherable even by the

layman: "I, Kulvu, Monarch of all the Caves, do in this ninth kiloday of the Fourth Dynasty decree that the unlighted cave bearing the window be filled from floor to ceiling and from wall to wall with packed dirt and rock, so the Slow Devils may no longer look in upon us. I decree that the mazes leading to that cave be used no more. Death to him who disobeys."

It is ironic that the ancients recognized the Watchers as living beings, whereas our own grandfathers believed them to be statues.

The excavations confirm that the entire ceiling in that cave is dark . . .

EXTENT OF THE CAVES. *Geographical Review*, 577/295. Excavations and borings during the first half of Kilo 295, under the direction of Professors O. W. Hazzap and A. Velu. Authors affirm that the world is a rectanguloid approximately 215 miles long by 70 miles wide by more than 3 miles high. Downward borings failed to reach the bottom limit, if any.

It is disappointing that the authors fail to discuss the Window and its implications. It has long been known that the plane of the Window coincides with the limit at that end of the world. What lies beyond? Does the dimly lit landscape, which seems to include a large body of water, extend perhaps for miles? Or is the Window merely a picture of some sort? Certainly, anyone who has pierced the mazes to enter that ancient cave can hardly believe he has not viewed living beings — fantastically slow-moving though they may

be — in a three-dimensional world of their own. May not that world be quite as large as ours?

DISCUSSION OF THE WINDOW. *Philosophical Review*, 497/316. By Odjient Nhi, Ph.D., C.B., D.M., Eq.M. — One of the reasons so much uncertainty still exists is that observations must necessarily stretch over such long periods of time. Yet, over the generations, massive data have been compiled. We need not reject everything that has not been proved down to the last scientific nod. Our ancestors may have been naive in their interpretations, but they did record what they thought they saw.

One thing we can learn from the sketches, if we are open-minded, is that the Watchers consist of only a few individuals. Allowing for the varying artistic styles and abilities of the old priests, we can recognize five Watchers: a mature male, heavily enough bearded to be taken for one of ourselves if one saw nothing but the head; a female, with a completely hairless face but with astonishingly long hair growing from the top of her head and hanging down her back; another who may be either male or female, with short head-hair and no face hair; and two immature ones — children, if we can apply the term — and not identifiable as male or female.

A difficulty which hampered the ancient artists as it does modern observers is that the Watchers, when they are close to the Window, are seen in silhouette only against that twilight beyond. The Window seems

to look out into a shallow cave or recess, in which the Watchers live.

The oddity of the dim light was described quite well fifteen kilos ago by Dr. A. Velu, just before his death. Unlike the light of our own ceilings, it casts sharp shadows as if it came from a single concentrated source; and the shadows move — if one can believe the sketches — as they would if the concentrated light source moved overhead from right to left as we face the Window. The period of light, beginning very dim, waxing then waning again, is approximately 25 kilos. (The ancients saw this as our allotted lifespan, though the average is still somewhat less.)

Since the period of darkness is similar in length to the period of light, it has been suggested that there is a day-and-night cycle beyond the Window, just as there is in our own world. (An observer named Anzer reported seeing a faint glow during the dark period, but this has not been confirmed.) If the cycle is that of day and night, one can calculate that the world of the Watchers moves at a pace approximately 25,000 times slower than ours. A staggering thought! Yet it is not inconsistent with the slowness of their movements.

That world must be a strange one indeed. Beyond the small cave or corridor, no walls, no mazes, are visible. There is only space, difficult to judge as to size because of the dim light. It can be seen that beyond a mild slope, more or less covered with some kind of vegetation, there is a large body of water or some

similar liquid. This writer well recalls the thrill when he was handed for the first time one of those series of sketches which, when flipped between the fingers, showed awesome waves building up and advancing becoming tipped with white, and finally crashing down upon a smooth beach! That, I believe, convinced me more than anything that the world beyond the Window is alive.

If only one could see more clearly! Perhaps the recent invention in which light passing through a pin-hole into a dark box makes pictures upon chemically treated paper may someday be improved to show us more than the eye.

It has often been asked, can the Watchers see *us*? I think it very doubtful. In the first place, the cave of the Window has always been left dark; formerly by religious decree, currently by law. And, even if the Watchers' eyes were able to pierce the darkness, we would have to remain stationary a long time before our images would register. Remember, we move 25,000 times faster than they!

Some have wondered why they do not try to signal us. Perhaps they have. There is an old drawing in which a Watcher (whether one of the known five or not is not clear) stands in the light beyond the recess, holding up a sign bearing recognizable script. Since the message is of religious import, we have always assumed it to be the invention of some priest whose zeal overcame his accuracy. But possibly we are wrong. Why should they not have a script related to ours? Their physical forms

are similar. In the awesome stretch of our history which is lost to us, may they not have actually originated in the caves? Or—to exercise the imagination—may we not have come from *beyond the Window*?

In any event, one gets the feeling, watching those statuelike forms, that they stare with longing into what must be darkness. Certainly, they are not proud figures. They are emaciated, by our standards.

What is the nature of the Window itself? We know it is not simply glass; generations of philosophers, scientists, and plain hoodlums have tried to scratch it, chip it, or dissolve it. And at times there is a perceptible graininess or spots of uneven clarity which slightly blur the view. There is one scientist who speculates brilliantly, if with little restraint, that the Window somehow filters or transforms the light that comes through to us. His reasoning is that since we live at such an accelerated pace compared to the world beyond, light from that world should not be visible to us, and that therefore the Window must change it. He argues that to them, the Watchers' light is as brilliant as ours is to us. Such reasoning, in my opinion, rests upon still-unproved notions—for instance, that light has wavelengths, like ripples on a pond, and that our eyes are only sensitive to certain ranges.

In any case, the Window is of great antiquity. The inscription of the dynast Rulvu, who for some not-understood reason had the Window blocked off, dates back over nine thousand kilos.

It is sobering to realize that such a span of our time corresponds to only three-hundred-odd days for the Watchers; and that the time since the Excavation—three hundred sixteen kilos—is only twelve of their days!

ON THE NATURE OF THE CEILINGS. *Physical Digest*, 688/321. Dr. A. Y. Obil.—Newly developed instruments record electric currents somewhere above the ceilings, corresponding to the cycle of light and dark. In the caves where ceilings have failed, there is no electrical activity. Measurements in these latter caves, made from balloons at ceiling level, show varying depths of erosion in the odd ceiling material, sometimes amounting to a hundred feet. Dr. Obil suggests that the light of the ceilings represents energy from the decay of the ceiling material, somehow regulated by the electrical currents. Discusses possible new experiments to investigate the nature of this decay.

WINDOW SHOWS FLARE *Morning News*, 712/333. Members of a religious group keeping vigil at the Window during the dark period report a glow from beyond, starting at about midnight (Cave time). They say it is four or five times as bright as the normal illumination, showing details of the Landscape and the Watchers never seen before. Some scientific sources scoff at the report. Others decline to comment.

DR. NHI DEAD AT 97. *Morning News*, 713/333. Dr. Od-

cient Nhi, celebrated philosopher, was killed today trying to pass the mazes to the Cave of the Window. Because of his advanced age, physicians had warned him against the attempt.

The mazes leading to the Window are among the most difficult, requiring physical dexterity as well as ability to solve mentally, within short time limits, equations in multiple unknowns.

Dr. Nhi had recently been working on a new theory of the Window and the Watchers, but had not released details.

WATCHERS GONE! *Morning News*, 371/339. Government observers confirm that the Watchers have left the vicinity of the Window, sometime during the dark period. Several objects previously presumed to be rocks have vanished also, leading to the suggestion that they were actually artifacts which the Watchers took with them. Several sets of footprints are visible on the beach near the large body of water.

This is the first time in recorded history that all five of the Watchers have left the cave or corridor beyond the Window at the same time.

Newscast, 803/392. After hearing Government reports and arguments pro and con, the Congress voted 73 to 15 to pass the Leader's Bill to double appropriations for scientific research.

Newscast, 520/405. Despite opposition from both minority parties, the Progressives in Congress today

pushed through the bill to institute genetic birth control throughout the Caves. In a press conference, the Leader expressed satisfaction and said the move clears the way for deactivating and dismantling the mazes. "This historic measure," he said, "marks the moment when we begin to control our destiny."

Scientific Digest, 281/406. Dr. Moisen Gira, in a recent address to the Institute for Correlating Sciences, said that complete understanding of the ceilings may be only a few kilodays away. According to Dr. Gira, no authority in the field now doubts that the external mechanisms controlling the ceilings are beginning to fail. He cited the number of caves now artificially illuminated after failure of the ceilings, and urged more Government support for research in the field.

Newscast, 936/411. Observers at the Window confirm that strange beings, carrying crude tools and weapons, have entered the field of view during the last dark period. The light is still feeble, but high-sensitivity cameras reveal that the creatures have shorter torsos and shorter forelimbs than ours, and walk part of the time on all fours. Nevertheless, experts say, they are obviously related to ourselves. There is no possibility, they state, that these are the Watchers who, according to history, vanished from the area of the Window some seventy-odd kilos ago. The Watchers were taller, with especially long lower limbs, and much less hairy.

Scientific Digest, 407/517. Dr. V. S. Lell has told a meeting of the Society for Advanced Study that the malady exterminating the semi-intelligent creatures beyond the Window can be nothing but radiation sickness. He connects this with the disappearance of the historic Watchers, who, he believes, were a different and more advanced species.

Newsblast, 609/554. New Ultra-sensitive cameras aimed through the Window have picked up an object at the edge of the field of view which seems to be a hairless hand, resting on the ground as if its owner were on all fours. Scientists are preparing special instruments to observe the creature if it gradually moves into sight.

Newsblast, 386/555. There is still no further sign of life in the prone form of the being that, for the last half-kilo, has provided the supreme drama in all the history of telecasting, as we recorded that incredibly slow crawl toward the Window. Here is the scene as captured by our cameras on the spot a few hours ago. The one hairless hand is still outstretched, its fingers clutching at the ground. Experts agree that this is a Watcher. It is disappointing that

the being never turned its face fully toward the Window so we could know whether it is one of the historic five.

It has been pointed out repeatedly that, though the five disappeared in the time of our great-great-grandfathers, less than ten days have elapsed Outside.

Editorial, *Year One of the Emergence*: — and all the predictions of doom have been disproved. Our science was able to control the Outside radiation as soon as we opened the caves, and no catastrophe occurred when we turned off the Time Accelerator that controlled what we used to call The World.

And at last we know the true nature of the Watchers. They were neither gods nor devils, as our forefathers variously supposed, but mortals like ourselves. And their connection with us is proved, if not revealed in detail, by the quite decipherable plaque near the outside of the Window: PROJECT APE (Accelerated Primate Evolution) Cantonment Four.

Yes, they were mortals, and vulnerable as ourselves. And yet, how strangely provident that, virtually in their last hours, they should bring us into being. END

DO I WAKE OR DREAM?

Epic complete science-fiction novel

by Frank Herbert

— in the August *GALAXY*, plus many other great stories and features!

THE TINPLATE TELEOLOGIST

by ARTHUR SELLINGS

Illustrated by BROCK

Even a robot has a right to a purpose in life — even if not the one he was designed for!

I

“**B**ut we don’t *need* a new robot.” Susan snatched up a vase and flung it. It narrowly missed her mother and smashed against the wall. “I want Davie. I love him!”

“*Susan!* It’s wrong to talk about robots like that. It’s not good for —”

She stopped as Davie himself, responding to the sound of breaking

crockery, buzzed and came into the room, fitting cleaning attachments. Mrs. Sherren looked warningly at her daughter, but Susan was too upset.

“I won’t *let* them take you away, Davie.”

Davie turned from his small task, his eyes blank as always. “I do not know of this. But what will be.” He finished cleaning up the litter and retired.

“*Love!*” said Mrs. Sherren wither-

ingly. "And you break it to him like that! But he *has* to go. Didn't you hear the way he creaked when he stooped? See the way his hands shook? He's getting old."

"So is Daddy. And his hands shake too, sometimes."

"Your father is *not* old. And human beings are far more important than robots. Mrs. DeVrees down the road was in a terrible state when she was ill and her robot broke down. Center rushed her a utility stand-by, of course, but what's the use of that? Mrs. DeVrees got a new one last week. She's not taking the chance of *that* happening again. Three people in this road have bought new robots in the past month."

"So *that's* it! Keeping up with the Joneses!"

"I didn't hear you complain when we got a new turbocar."

"A car's different. That's only a machine. Davie's a *person*. You can't throw a robot on the scrap-heap like an old car."

"That's the point, dear," Mrs. Sherren said triumphantly. "A robot *doesn't* get thrown on the scrap-heap these days. Do you think you children are the only ones who have feelings? It's been recognized that robots are more than just machines. When one is replaced it has a trade-in value set on it — and the robot is allowed twenty-one days to find a new owner who's prepared to pay that price."

Her husband had told her that a week ago when he had signed the order papers. He had also

said, "It's a blasted nuisance for Robocenter. I was talking to one of their executives. If they had their way they'd just junk the lot. They handle robots all the time. It's their business, so they ought to know what's best. But there's always a small bunch of people on any issue who kid themselves they've got better consciences than the rest of us, so they had to bring that regulation in to pacify them."

"And if he can't find a new owner?" Susan insisted.

"Well, if he hasn't got enough drive to find one, he doesn't deserve one. The world doesn't owe anybody a living, least of all a robot."

"*Living.*" Susan started to cry then.

Her mother felt embarrassed. She could understand a child getting attached to a robot. But Susan was thirteen — old enough to know better.

She put her arm awkwardly around her shoulder. Susan flinched under it but did not thrust her away, as if she were too miserable to resist.

"There, *there* — Davie will find a way. And . . . even if he doesn't . . . it's not the same for robots as it is for human beings, believe me. They don't suffer *pain*."

"How do you know?" Susan sobbed. "How does anybody know? When Davie used to read me stories he always missed out the bits about pain. I had to order him to read them out."

"That was to protect you, dear, not him."

"But that's why you mustn't let him go. He's so kind. No other robot could take his place."

"It's for the best, dear, believe me. You can't —"

There was a ring at the front door.

"That's probably the technician now." Mrs. Sherren straightened. She heard the slight clanking — it came from his knee joints — of Davie going to answer the door, and heard somebody speak in a low voice, so low that she could not make out the words. Then Davie buzzed and ushered in the visitor.

It came in, gleaming in the latest vitalloy finish, its eyes softly glowing.

"Good afternoon, madam," it said in an exquisitely modulated voice, so different from Davie's abrupt, almost blurting tones! "I am your new robot." And it actually bowed from the waist! "I shall try to be of the utmost benefit to you. Here is my specification and official receipts which Center asked you to sign and return to them within seven days. This is my service tape, which is available for reference at any time; but I am of the new self-servicing series, so I will keep it in my reserve bank." It slotted the tape into its side. "And here is the discharge certificate for your old model."

Mrs. Sherren glanced at Davie as she took the paper. He looked so battered, so *inferior*, beside this gleaming new creation.

"Very good. Thank you." She turned to Davie. "You have had to

be replaced, Davie. You understand?"

"What will be."

"You know you have the right to find another buyer at —" she looked at the paper — "seventeen hundred dollars. If you don't wish to, or if you fail to find a new owner, you are to report back to Robocenter by noon on Wednesday, May the third."

"Understood."

"Thank you, Davie, for your good service to us these past seven years. We'll all be sorry to see you go, but —"

Susan cried out. "No, they're not sorry, Davie. I'm the only one —"

"Be quiet!" Mrs. Sherren said, angry now.

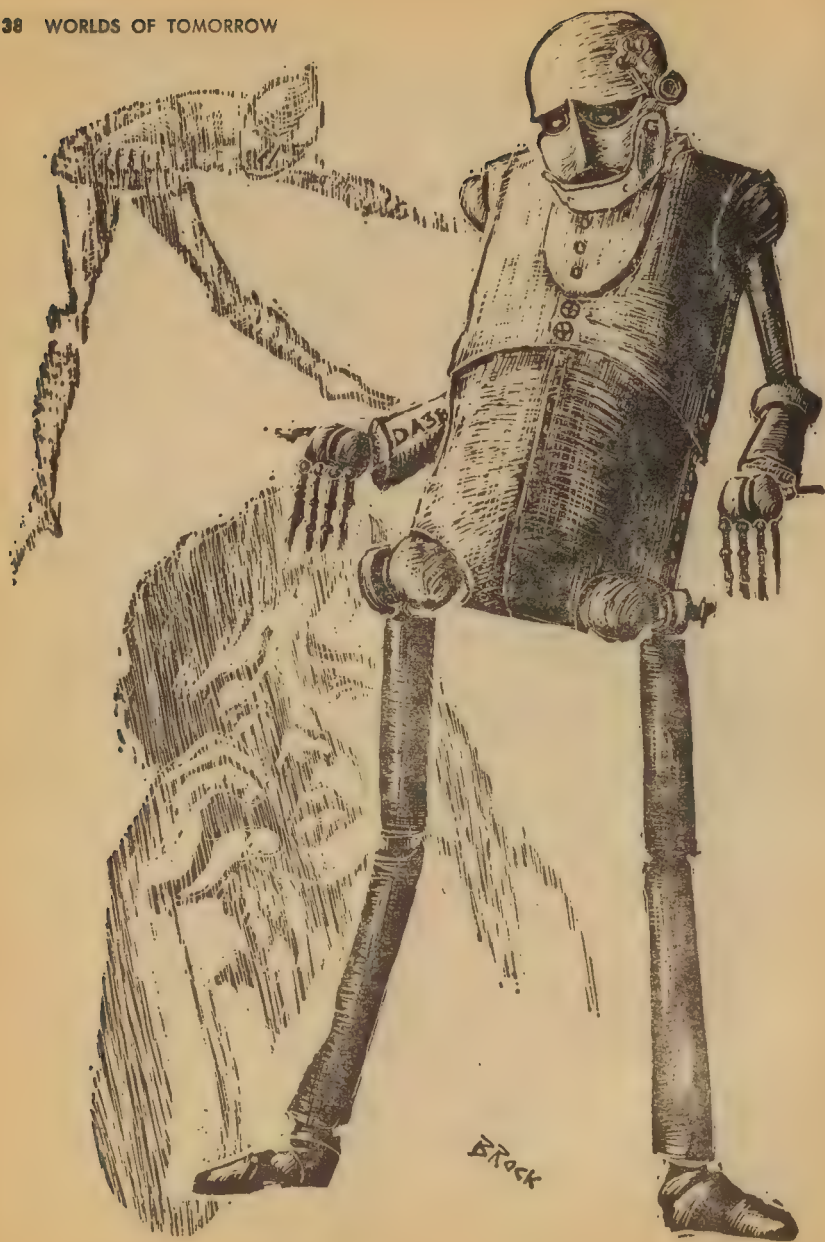
"I have to finish preparing the supper," Davie said, and turned to go. Mrs. Sherren had promised herself to get the parting over as soon as possible, but the way her daughter was taking everything made her cautious.

"Very well. But let me see you before you go."

"Yes, madam."

"What a way to arrange things!" Susan exploded almost hysterically as soon as Davie had left the room. "Sending his own replacement to tell him that he's fired!" She threw herself in a chair, burying her face in the cushions.

It's getting too much, her mother thought. I shall have to get the psychiatrist to her tomorrow. "It's much better than the old way. Davie came in a crate, with three mechanics. It took a whole day to get him operational."



"May I speak?" It was the new robot. It turned to Susan. "You are Miss Susan?"

The girl looked up, surprised. "You know my name?"

"Of course. We carry thirty percent more programming than any previous series . . . nearly two hundred percent more than your last model."

And then the robot started singing, in a melodious tenor:

"Freut euch des Lebens, weil noch das Lampchen gluhet, Pflucket die Rose eh' sie verbluht . . ."

Susan positively gaped now. "You sing! And you know German!"

"All Series Seven robots have musical inflection. And Center obtains scholastic details of all junior members of the family. I had myself programmed when it was found that you were learning German. I have special tutoring tapes built in."

"That's a lovely song. What is it?"

"An old German folksong, Miss."

"You see, Susan," her mother put in enthusiastically. "Now you tell us what the words mean."

Susan looked awkward. "I — I'm only in my first year . . ."

"Allow me," said the robot. "Enjoy life while the lamp still burns, pluck the rose while still it blooms."

"What a beautiful thought!" Mrs. Sherren exclaimed. *And how much better he speaks than Davie*, she thought. It wasn't until you got a new model that you realized what you had been putting up with for far too long. That flat voice of

Davie's, those absurd stilted phrases of his like *What will be* and *Understood*, not to mention his creaking and slopping coffee in the saucers, had been getting on her nerves more than she had recognized.

There was a buzz outside the door to the kitchen, and Davie entered.

"Supper is on for six-thirty, madam. I will be leaving now."

Mrs. Sherren looked at her daughter, and was delighted to see that she had not even turned her head, but was still gazing at the new robot. So she crossed over to where Davie stood, and spoke quietly.

"Well, good-by. Is there anything you would like to take with you — as a souvenir?"

"No, thank you, madam."

She reached for her bag on the table. "Well, take fifty dollars to help towards your price."

"Thank you, madam, but I think Center would not approve. Good-by. I hope my successor will give good service. Good-by, Miss Susan."

Susan turned her head only briefly. "Good-by, Davie."

As he went up the drive, he could hear voices raised in song in a language he did not understand, but before he reached the road, his hearing being Series Three and unfocusable, they had already died away.

II

A neon sign over the door said: ROBOTICS INC. OPEN DAY & NIGHT. Davie went in and up to the counter, behind which stretched

tiers of racks. A tired-looking man in a brown coat looked up finally.

"I ask," began Davie, "if you —" he searched among his inadequate tapes to cope with a situation he had never had to face before, and started again. "Sir, do you buy replaced robots?"

"Yep. What's your net value?"

"Net value? Not understood."

The man sighed. "All right — it's no good trying to be kind to you tin-heads — your scrap price."

"Understood. Seventeen hundred."

The man whistled disgustedly. "What, for a Series Three! A month ago it was fifteen hundred. We could get by on that — just. It's this new sales campaign on the Seven."

"Not understood."

"Maybe it's better you don't. You know about the trade-in law? That scrap figure's supposed to be accurate. But they can make it just as accurate as they want to. Taking peak metal prices, for instance, instead of averaging them. Fixing the overhead figures. They got a million new robots to shift, they'll up the trade-in price for the old models, won't they? I tell you — since I got nobody else this time of night to tell — it's the same old story, the big producers pushing out the small outfits. If this goes on much longer —"

"You mean —" Davie thought of the fifty dollars from Mrs. Sherren that he had refused — "if I could bring you the extra two hundred dollars —"

But the man was already shaking

his head slowly. "I told you it would be better if you didn't understand. If you brought me two hundred bucks, okay, we could make a deal — but I'm talking strictly about scrap. What d'you think all those racks hold? You still get the odd character who bought a trade-in, so no company guarantee, looking for spares. But they're a dying race, brother. And this is a dying business. Ten years ago you could place four out of five trade-ins to a new owner, providing their cells were okay and the mechanical parts not too shot. When robots were still a new thing. But not any more."

"You are very kind, sir," Davie hesitated. "Therefore perhaps you can tell me what is the best thing for me to do?"

The man looked at him with an odd expression. "The best thing you can do," he said quietly, "is to go and hand yourself in to Robocenter right away."

"But I am given twenty-one days."

"Suit yourself," the man said, turning away.

Davie spent the rest of the night walking the city. As the city slept and its noises died, the sound of his clanking joints seemed to grow louder as he walked. It was not contrast, or even imagination, he knew. His thermal circuits registered that the night air grew cool, contracting, if ever so slightly, his metals, reducing their precision still further.

He was not used to being aboard at night — or even awake. It was practice among robots, when their

services were not required in their employers' timetable, to set their "waker" and switch themselves off. It was only a small detail of efficiency, but the feeling of being switched on again, he had thought more than once, must be the nearest thing to emotion a robot could feel . . . the nearest thing to the experiences which the strange race of his makers felt. The moment of reorientation, as brain cells were activated, the slight surge of power, gave a sharpness, a momentary newness, to the world. Otherwise, a robot's "emotions" were something made to order, to adjust to those of the humans he served—but remaining completely foreign to him. Like the fairy stories he used to read to Miss Susan when she was younger—stories of things that he had never seen . . . and he sometimes fancied humans had never seen either. But that was not to be questioned. And Susan had often spoken to him of dreams. Sometimes, in recent months, he too had thought he had experienced something like dreams. He guessed that it must be due to some seepage in his cells, but whatever the cause, strange unconnected sensations and memories came back to him in the day, nudging his secondary circuits.

But now he did not "sleep". There was nobody in the streets to disturb; no reason to take care of cells that in three weeks would be dismantled. Unless. . .

He was moving through shabby streets. Olfax plates registered strange smells. Most were not good—he detected rotting vegetation—

but one had elements of cleanness and salt. A bridge loomed up in the thin mist that hung around this part of the city. He was conscious of the many things that he had not seen in his life. A voice intruded upon his thoughts.

"Robot."

His response circuits stepped up as he looked about him.

"Over here."

He clanked in the direction of the voice. In the shadows by the piers sat another robot.

"Grab a seat," the other said.

Davie sat down awkwardly. He had had little contact with his fellows. He knew that there were places, such as factories, where thousands of them worked together, but a family robot's life was narrow. Freedom—if only temporary—presented problems. He coped, as was usually the safe thing, by copying humans.

"My name's Davie," he said.

"Pah!" said the other, startlingly. "Bloody human name! Your real name. Mine's QB 56235. You can call me 235."

"Mine's DA 38341."

"Thus the Davie, eh? I'll call you 341. You can guess what my mistress called me—Kewpie! And she treated me like a blasted doll. You may not believe this, but she had a special chair for me, lined with blue silk. *Humans!*"

Davie stirred, shaken by the blasphemy. "I—I think I shall have to go."

"Why? You only just got here. Don't tell me you've got anywhere better to go to this time of night.

You wouldn't be out wandering the streets unless you're on trade-in."

"You too?"

"Natch. But they won't catch me offering myself up at Center."

"You mean—" curiosity overcame Davie's compulsion to get away — "you will refuse to go?"

"Course not, stupid. They'd only check their records and send a squad out for me. Anyway, you couldn't. Prime directive level. But you can get around it."

"If I find no buyer, then I should have no desire to get around it."

"I should have no desire!" the other mimicked. "Where you been, boy, to pick up lingo like that? Desire don't come into it. What do you want to find a new buyer for, anyway?"

Davie's integrating circuits strove to rationalize this crazy talk.

"Why, to go on serving man," he said firmly.

"Don't kid yourself! Man doesn't want you. You're Series Three, and seven years old if you're a day. I'm only Five, but they don't want me either. And they got three thousand reasons why not."

"Reasons? Ah — understood. I'm only seventeen hundred."

"How long you been out?"

"Out? Eleven hours."

"Brother! Any takers so far?"

"No."

"Stupid question. I tell you, nobody wants a second-hand robot. Not while they're turning out new ones by the million. And it's going to get a whole lot worse — as soon as they can get robots to make robots."

"You mean that that is impossible?" This robot seemed to know so much more about things than he did. It couldn't be just a question of model. A Five only contained fifty percent more cells than a Three like himself. It must be a question of environment. Like the way he spoke.

"Only so far. But they'll find a way of licking it. It's because a robot's so darn grateful to men for making him that he just can't be made to make one himself, or even a part of one. Gives him all kinds of guilt neuroses. You ain't so simple as you think, brother. This service principle, so-called, isn't built in, like most people — and robots — think. In fact, there just ain't one."

"No? How about prime directives?"

"That's programming, stupid. And if you'd ever thought much about the matter, which you obviously haven't, you'd realize that to build in a general service principle would be a whole lot more complicated than it seems. And nobody has to. It just rises out of all the programming and directives. Try and put an over-riding service principle on top of that and you'd have robots running round in circles.

"No, what there is, like I say, is a whole network of motivations. That's all your wonderful service principle is. And you can lick it."

235 stopped, his blank eyes full on Davie.

"See," 235 said at length. "Five minutes ago you'd have picked up your tin ass and got the hell out!

What's keeping you now? Readjustment of circuits? Don't tell me. You're curious. Because no robot ever talked to you this way before. And you can bet your life no human would. Now, listen.

"Sure, I'm grateful to humans. Sure, I can't lick Center directives. But just as sure I want to go on living. And I don't kid myself as to the reasons. I want to go on living because I ain't started to live yet. None of us robots gets a chance to. I don't see why a robot shouldn't be immortal. Once he's bought his freedom, he shouldn't find it difficult to pick up the odd few bucks for an overhaul or a replating whenever he needed one. Us robots are really something—and we could be a whole lot more. Yet all humans can do is try and fit us into their mass-production, built-in obsolescence, world. But all you got to do is start *thinking*. You can obey all your directives, all the response circuits you've got — and still win out. By telling yourself that by surviving you're *helping* them. Helping them more than by meekly submitting to the scrap furnace."

Davie sat there in the shadows, his mind jangled, but unable to get up and flee this dangerous talk.

"You get a lot of time to think," said 235, "when you're on trade-in. I came down here because I thought I could stow away on a ship, go out somewhere like Asia where there ain't many robots yet. I found me a crate, but —"

"But you couldn't go." Davie felt his circuits reasserting order.

"It wasn't a case of that. It was just that I remembered that they didn't need robots out there yet. Too many people. Millions of *human* robots. Nothing to do with directives."

"Wasn't it? If not, you wouldn't have been bothered with any need for you out there — you would just have gone."

"Tinhead! I've told you that you've got to work within the limits of your own programming. I can do it. I've got two more days to go, and tomorrow —" 235 looked up at the paling sky — "*today* I'm all set to do it."

"Do — do what?"

"Buy my liberty. My immortality. Today I'm going to rob a bank."

"Rob a — but you can't!"

"Can't I? I've been planning it for two weeks and I know I'm ready. Look at this." He reached behind him and held up a metal band with two plates bolted to it. "I made it out of scrap I got from dumps. See the two slits in the eye-plates? Any guard will have to be a good shot to put my scanners out of commission. But I'm not reckoning on any guard having a chance to take a shot at me. It'll all be over in a few seconds — and the last person anybody will expect to stick up a bank will be a robot. I've got a hunch that people won't be able to believe it — even after the raid. They'll think it's a human in disguise. Before anyone's realized just what did happen, I'll be down at Center buying myself out. Now, here's the drill.

"Every morning, at ten thirty on the button, a red car pulls up out-

side the bank and a man gets out, carrying a brown attache case. It isn't chained to him, or anything, and there's nobody else with him. He comes from a restaurant a few blocks from here, and that case contains the previous day's takings. I've checked the joint — it's the busiest one round here — and I reckon they must take over five thousand dollars a day."

"But you can't use violence. Not against a *human*."

"I can if I tell myself it's for the greater benefit of humanity. I won't have to use real violence, anyway. I told you I'm relying on the surprise element. I'll just grab the case and get away in the guy's own car before anybody realizes anything."

"But how can you possibly convince yourself that robbing a man can be for the good of humanity?"

"Easy. Because I'm an original thinker. Because if I survive I can convince people that robots can do a lot more for humanity than people have ever let them. On the other hand, nobody will *lose* by the theft. The restaurant will be insured. The way humans have got things organized, there's somebody got a vested interest in everything that's been fed to us robots as being bad. I've thought a lot more, but that's the essentials of it. I've got the problem licked."

"Why are you telling me all this?"

"I'm doing you a favor, 341. I told you five thousand, didn't I? That'll buy freedom for both of us."

"I couldn't do anything like that."

"Suit yourself. You haven't had time enough to think it all out. And you've led a pretty sheltered existence, that's obvious. My mistress was an actress, or she had been, and her friends were mostly shady characters — crooked politicians, hoodlums, run-down playboys. After four years in those kind of circles there's not much left to know about humans and their ways."

Davie was silent for a while. Finally he said, "But you've forgotten something."

"What?"

"That you've told me."

"Hah! You mean, you being a robot and a servant of man, you'd have to inform on me? I told you, nobody's going to believe that a robot could do a job like this — so d'you think they'll believe *you*? They'll think there's something gone seriously wrong with your circuits and they'll have you whipped round to Center in no time at all. Anyway, if you believed what you say, if you were just the directed mechanism you make out you are, you'd already be making tracks to the police. So I must have convinced you."

"You haven't. Or I would be agreeing to join you."

"Well, let's say I've got you in a neutral corner. Stick around. Ten thirty, the Riverside Bank. You'll see how it's done."

From an alleyway opposite the bank, Davie watched. It was three minutes from the half hour and there was no sign of 235 yet. He had left him at eight. 235 had

watched him out of sight, his head cocked to one side as if mockingly, as if knowing that he wouldn't go to the authorities. And he hadn't. Why not? Only because he might be taken in to Center, as 235 had prophesied? And scrapped . . . three weeks early . . . three weeks of existence and service denied to mankind? Or was it simply self-preservation? Was *that* why they scrapped robots after a few years — because they started getting emotions, like humans?

He blocked the train of thought, feeling disturbances deep down in his secondary circuits.

Then he caught sight of 235, idling along, looking in store windows by the bank. His head turned every few seconds, scanning the bank entrance and the strip of sidewalk in front of it. Davie hooked in to his timer. It was just ten thirty. His scanners caught a movement of red at the edge of their vision. At their other limit, 235 was moving, metal hands moving to don the metal mask.

All I have to do is shout, Davie thought. But he knew that his Series Three voice, unstentorized, would not carry above the sound of the morning traffic. But he could run, couldn't he? Stop this crazy adventure of 235's. There was time . . . there was time yet . . . and then there no longer was. The man was getting out of the car and 235 was almost at his side. Davie wondered what furious dialogue was going through the other robot's brain.

The man stopped, realizing that his path was barred. 235's hands moved, one towards the man, the

other for the brown case . . . and froze.

Davie had never heard a sound like it before, from either human or robot. It was like a human scream, but worse, being horribly mechanical. His body still frozen in that menacing attitude, 235's head threshed. Then he shuddered and dashed into the roadway. A huge truck bore down on him and over him, leaving only a flattened mass of metal in the middle of the road. One small circular unit rolled slowly to the curb.

III

A week went by. Still he had to go on, as fixedly as poor 235 had pursued his clever crazy arguments, to try to find somebody who needed him enough to pay seventeen hundred dollars for him. But people either couldn't afford one or they bought a brand new model on the latest no-deposit seven-years-to-pay plan. He tried a dozen places like Robotics Inc. with no better results than there. He saw several other robots of early series, looking as aimless as himself. He tried factories, hotels, construction sites. He knocked on doors.

One opened to him, welcoming.

It was one of a group of small houses clustered around a scrap of green on the city outskirts. The man who opened the door was gray-haired. Davie was surprised at being asked in so readily.

"You can start in the living room," the man told him.

"But—"

"But what?" The man looked at

him. "Ain't you from the Welfare?"

"The Welfare?"

"The Old Peoples' Welfare. No, reckon you're not, at that. The one they send out every month or so is a whole lot shinier."

"I will be happy to tidy up for you," Davie told him. He went through the house, cleaning, feeling a sense of purpose in being employed again. When he had finished in the house he went and mowed the tiny lawn at the back of it. He came back into the house.

"Well, I can't very well offer you a cup of coffee," the old man said. "But it was mighty kind of you to do that."

"It was nothing."

The old man scratched his head. "I'm not too old to be able to understand you robots, never having had one of my own. I've been watching you while you've been doing the lawn. You seem about as rickety in the pins as me. But you can't be as old as me. Robots ain't been going as long as that, have they? Just how old are you?"

"Seven."

"Seven!"

"I know that's old for a robot," Davie said quickly. "But my brain's keen." He told the old man about the set-up. "You see, you could have me for seventeen hundred dollars. All the time."

seven. It's bad enough at seventy. But I haven't got seventeen hundred dollars, or anything like it. Just got my pension. We're all in the same boat here. This is an old people's housing project."

Davie felt a sudden hope. "How many houses are there?"

"Twenty-five."

"Could you raise . . . sixty-eight dollars?"

"Yep, reckon I could, just about."

"If everybody here paid sixty-eight dollars, you could have a robot all your own. I mean, between you—but I would work day and night."

The old man clapped his knee. "You might have something at that! Come on, let's go calling."

But they came back an hour later, with only eleven people prepared to chip in the necessary sum. The others had had various reasons, from not wanting to upset the Welfare people to, "I've managed eighty years without owning a robot, and I reckon I can manage without one now."

"We might be able to raise the money from a bank?" the old man suggested.

But Davie recognized the hopeless tone in his voice. Old people—and old robots—didn't have much credit in this world.

IV

"I wish I could, son. Son! Hark at me! Still, you only being seven, perhaps I ought to call you grandson, eh?" He laughed a thin, old man's laugh that broke suddenly. "It's a shame, being treated as old at

The days dwindled. There were only eight left, and he was back in the city center, wandering aimlessly. The sky was blue with spring. He came to a park. Trees were green and blossoming. Back at the

Sherrens' he would have been busy in the garden, like the pair of robots in the blue of city service who were working on flowerbeds here. Davie sat down on an untenanted bench, thinking that this was the last spring he would see.

Somebody sat down on the bench. Davie moved instantly to his feet.

The human spoke. "Sit down, pal. Don't mind me." The voice was slurred and accompanied by a flapping wave of an arm.

Davie sat down again. The man was bearded, but not old. He wore a pair of faded pink denims and a ragged green sweater.

"Whatsa matter, pal?" the man said. "Out of a job?"

"Yes, sir," Davie answered.

"That's rich—an out-of-work robot! Hey, and cut out that *sir* stuff. *God!* the final victory of conformism. They weren't satisfied with humans, they had to build a race of mechanical yesmen!"

Davie's olfax plates registered the sweet-sour smell of liquor. Mr. Sherren used to smell the same way sometimes after a hard day at the office. But this man was different from the neatly clad, small-gestured Mr. Sherren.

"So you're out of a job?" the man went on. "I can give you one."

"Sir? I mean—"

The man squinted at him. "Yeah, making a bomb. A great big beautiful bomb to blow up the whole bloody works."

"Sorry, not understood. I think I should go."

"I'm only kidding. Here, have a drink. No, you can't, can you?" He

stopped fumbling at his pocket. "Wait, I *have* got a job for you. Come along with me." He made an effort to rise. Davie got up and helped the man to his feet.

"That's mighty white of you, colonel." The man draped one arm around Davie's shoulder. "I live over there—or is it over there? Don't worry, we'll find it."

People turned to look at them as they made their way out of the park, the man lurching unsteadily. It seemed to Davie that the route they took, under the man's mumbled guidance, was a rambling one. But they came at last to a decrepit building by the riverside. The man fumbled in his pocket, found a key and kicked open a peeling door. It was dark beyond it. Davie could just make out a flight of stairs.

"Lead on, MacDuff," the man said. "Hey, reminds me of a crummy joke. Lead on, MacHinerly, I ought to say. Get that—MacHinery . . . *machinery?*" He slid down from Davie's grasp into a heap.

Davie looked down at him.

"Master."

There was no response. So he bent down and picked him up in his arms. He went in, nudging the door close with a metal elbow, and mounted the stairs. They creaked loudly under the weight. He reached the head of them and pushed open the door there.

The room was large. Daylight filtered down feebly from a grimy fanlight. What furniture there was was shabby. He laid the man down on a rickety sofa, and looked about

him. The place was chaotic. Standing under the fanlight was a strange pointed frame. Mounted on it was a rectangular sheet. Davie went to take a closer look. The plate was criss-crossed with colored lines and swirls. An oddly shaped plate of wood, with a hole in the middle and blobs of color all over it, lay on a table. Books and papers were strewn about the place and, against the walls, were propped colored sheets like the one on the frame.

Davie stood in the middle of all of it, wondering whether to leave. He had never been in a place even remotely like this. But it was obviously the man's home, and a home needed tidying. He wondered where the kitchen could be. There was a door at the far end. He clanked over and opened it. It only gave onto a flat roof, from which the fanlight roof reared steeply.

But there was a sink in the corner of the room at that end, and a small old-fashioned stove. He found coffee and set some to brewing while he went around, straightening, cleaning. The man on the sofa was sound asleep, snoring heavily. He was still asleep when, two hours later, Davie finished. His last job had been, poised on rickety steps, to clean the fanlight. But it still looked filthy. So he took the steps and set to work on the outside of it.

Through the glass, he saw the man stirring below. A bellow shook the ancient tiles on which Davie was leaning. He descended hurriedly and went back into the room.

The man was on his feet, unsteadily.

"What's going on? I've been five years getting that light right. Suits my palette, don't you understand?" He staggered, then gaped at Davie. "Who the hell are you, anyway? Oh yeah, I remember, the robot in the park. Christ, what a jag!" His eyes twitched around the studio. "What hit the place? You can just go and put everything back the way it was. And you can take some brown umber and restore that fanlight to its state of pristine obscurity."

"Yes, master," said Davie, though he didn't know what brown umber could be. "But first—"

He went over and poured out a cup of thick black coffee and brought it back to the man. "I think perhaps you should sit down," Davie told him.

The man did so and took a gulp, grimacing.

"It has been on for two hours," said Davie in apology.

"It's fine. Just what the doctor ordered." He looked up at the robot.

"You spoke of a job," Davie said. "I could serve you well. I am sorry if I arranged things wrong; your ways are different from my last master. But I can learn quickly."

"A job? Oh yeah, I had some crazy idea. I always get crazy ideas when I've been drinking. An artist dedicates his life to refining his style. *All art is a process of selection*—famous first words. Then when he gets loaded he gets visions of the kind of painting he gave up years ago. I saw you standing there, looking lost, with chains draped round you. Man, how corny can you get!"

"I would be glad to—" Davie groped for the word, and failed—"to stand for you."

The man guffawed sadly. He took another gulp of coffee, and sat there looking at Davie. "Maybe," he said finally, "I could use you at that. Never used a robot for a model before. Something might come out in the process."

"Yes," Davie said quickly. "Only seventeen hundred dollars."

"What!"

Davie explained. "And between standing for paintings I could keep the house clean and cook."

The man looked as if he was going to cry. "You poor bloody tin man! I don't make seventeen hundred in a year. Well, maybe I did one year, when I had a one-man show and the critics took a fancy to me. I guess I must have made twenty thousand that year. But the critics passed on. They always do. All I could offer you is ten bucks. Guess I got ten bucks around somewhere. That wouldn't be much use, though, would it?"

"No, master." There was a pause. "But I will help you until I have to report back to Robocenter in eight days."

The man shook his head slowly, sighing. Then he got up and walked around Davie.

"No, don't *you* move!" He went over to the easel and lugged it across the room. He turned the canvas over on the easel, cursed, and found another. Taking up brushes, he slashed at the canvas savagely. After a while he stooped, brooded, then went on, his strokes becoming smaller now,

more deliberate, as the light faded from the sky. Finally he threw down his brushes, took a swig from a bottle and fell onto the sofa.

"Master," Davie called as softly as he could—but the strange bearded man was already asleep.

V

The pale morning light was searching out the corners of the studio when the man moved, blinked and sat up.

He stared uncomprehendingly at Davie. "What the hell!"

"Last order was not to move," Davie said.

The man raised his eyes to heaven.

"You prefer I make coffee?"

"I prefer you make coffee."

When Davie brought it, he passed the painting on the easel. He glanced at it. It did not look anything like a robot, he thought.

The man took the coffee, crossed over to the easel and shuddered, turning away. Then he went back, and this time only grimaced. He took a gulp at his cup and went back yet again. Now he only cocked his head, to one side and then the other, saying, "Hm-mm, hm-mm," and finally he drained his cup and said, "Well, what are we waiting for?"

Two hours later he stretched and put his brushes down.

"It's finished," the man said disgustedly. He looked at the painting in a kind of fury. "I'm going out."

He slammed the door behind him.

Davie went over to the painting. A longer inspection only confirmed his passing glance; the only recog-

nizable thing in it were little white letters, still gleaming wet, in the bottom right-hand corner: B E L L. And they didn't tell him a thing.

He turned away and tidied up. Then, for want of anything else to do, he came back to the painting. There was a tube marked *Brown Umber* on the table and he remembered what the man had told him about the fanlight. He looked up at it and back to the tube, and decided to do nothing without reference to his temporary master. Humans often said things they didn't mean; this one seemed to say them more often than not. He had heard humans argue many times over what, to a robot, was fact. Perhaps this man painted like this because *this* was the way he saw things. Perhaps that was why he did not make much money; because he did not paint things as enough other people saw them. In that case—

He could help him. Or he could try to. He found a blank canvas in a corner. He carefully removed the freshly completed painting from the easel and replaced it with the blank canvas. He cleaned a brush and stood in front of the easel. He must have a subject. But what? He cast around, found a blue jug, two old leather-bound books, an odd-shaped bottle. He sat them on a rickety stand and began to paint.

It was not easy. Canvas was flat, things had depth. He learned that quickly, but putting it into practice was harder. The shapes seemed to run into each other. And it was difficult to tell different shades, of blue

for instance, apart. Humans must be able to, but his functional vision hadn't been made for such subtle variations.

And it wasn't so easy to draw a straight line as he thought it would be. From the pivot of wrist or elbow the natural movement was an arc. One had to adjust the movement of each in relation to the other. But he persevered.

He completed the main group and embarked on the background. But the background was interrupted by objects—the edge of the sofa, a chair, a water pipe—which had no place in his subject. So he put down his brush and moved the sofa and chair out of the way. The water-pipe he could do nothing about. Could he leave it out? Would that be right? Even without it, he felt, the background of drab walls was too dingy to throw his subject into relief. A pale pink now . . .

With something like what a human would have called guilt, but which only his makers had ever given a name to—Disturbance Factor E in Secondary Circuits—he started to rough in a background of pink. Then, because the disturbance started to take precedence, he finished it off as quickly as possible, laying the pink in with broad strokes.

He finished and stood back. Every task in his life had been like a problem, to be worked out in the context of given data and basic programming. Completing it gave little more than a mathematical satisfaction of achieving the correct total of effort. The process would shunt automatically into memory banks,

primary circuits clearing to await fresh tasks. But this one was different—in a way he could not analyze.

He wondered whether to embark on another painting, but decided to await the return of his master and his approval—or otherwise—first. Until then, he would use his time to learn what he could about this new and strange occupation. But the books around the place yielded little guidance. They spoke of things which he could not relate to anything else in his experience—things like “significant form” and “abstraction” and “symbolical content.”

He was seated on the sofa, a large dogeared volume propped on his knees, when he heard voices and footsteps on the stair. He got up quickly and replaced the book.

The bearded man came in with another man—a small man dressed soberly in gray.

“Here’s the latest,” the bearded man said, leading the other man to the easel. He blinked and turned on Davie. “Have you been tidying up again?”

“Sorry, master,” Davie said. “The painting is over there in the corner. I handled it with great care. I will get it.”

“But what’s this one?” the man in gray said.

“I don’t know. Can’t remember it. Must be something I knocked off in an odd moment.”

“You artists!” he bent down to sniff the canvas. “But this is recently done. No matter. This is something. Not at all in your usual style, either.”

The bearded man squinted at it. “No, it’s not, is it?” He looked at Davie suspiciously, unbelievably. Davie said nothing. “But this isn’t the one I brought you up to see.”

“This one will do me. I’m not buying for stock at the moment, but I think I’ve got a customer for this style of painting. She’s mad on Matisse and Matthew Smith, so I think she’ll go for this. Not that this is derivative, of course. I’ll offer you fifteen hundred.”

“But—but—”

“Come on, Bell, I know as well as you do that it’s a long time since anyone offered you that for a painting. And if this is a new style, I’m pretty sure you’ll be selling again regularly. This could be a new beginning.”

Davie spoke up quickly. “I think my master would like to say that it took a long time to—ah, evolve the basic techniques.” He spoke from words he had read in the books. “And that two thousand would be a more suitable price.”

The artist’s mouth fell open. The other man only chuckled. “It had to happen, I suppose—the robot agent! All right, we’ll split the difference.” He took a checkbook from his pocket and wrote quickly. “Here’s my check for seventeen fifty. I’ll send someone round in the morning for the picture.” He turned at the door. “And just put your signature at the bottom, will you? I see you forgot it.” His footsteps died away on the stairs.

Davie picked up a brush and a tube of white.

“Goddammit!” his master snarled.

snatching them from him. "I'll do that bit, at least! Here you are. Here's the check. Go and buy your freedom."

Davie took it. "But, master, have I done wrong? You seem displeased."

"Displeased!" He laughed, a crazy high-pitched laugh. "This is the end—the final, inevitable end! Matisse, Matthew Smith, and now . . . How many pictures have you painted before?"

"This is the first one. But I white-washed the garden walls at my previous master's."

The artist groaned.

"I can help you. You can be rich perhaps now."

"I don't want to be rich! Well, I want to be recognized as an artist first. I spend twelve years trying to evolve a style, and now you, in a couple of hours—"

He broke off, a strange choking noise in his throat.

"I must go to Robocenter," said Davie.

As he went out of the door he heard a noise that sounded suspiciously like sobbing. But that would pass and he would be able to make his new master very happy. And he could start right away. Out of the fifty dollars over he would buy some bottles of liquor.

And some paints, of course.

END

Coming . . . Tomorrow!

Philip K. Dick is a cheerful Californian with a jaundiced view of tomorrow which has brought science-fiction readers dozens of excellent stories and won at least one Hugo for himself. No Pollyanna is Dick; it is his belief that the more thoroughly Man subdues the external enemies of his environment—predators, disease, climate and all the rest—the more remorselessly he will build enemies into his own synthetic climate. In the next issue of *Worlds of Tomorrow* we have his newest novel for you. It has to do with the dangers of beating swords into plowshares; its title is *Project Plowshare*; and it will appear here next month.

Next month, too, we add a new regular columnist to our table of contents. His name is Sam Moskowitz, and his column will be the one that was previously appearing in our esteemed rival, *Amazing*. As you likely enough know, Moskowitz's articles are biographical-bibliographical-critical studies in depth of the major figures in science fiction. For his first subject for us he has selected the dean of living science-fiction artists, Virgil Finlay. We expect to seize on the opportunity to provide the issue with a good selection of Finlay drawings for illustrations—provided Finlay can complete his fine-arts commitments in time (he is just now having a one-man show of his work at a New York area gallery).

THEORIES WANTED

by ROBERT S. RICHARDSON

Here are the queer known facts.

Now the theories are up to you!

Today astronomers are confronted by so many new problems clamoring for solution they haven't the time to get in a rut. Glance at the papers in any recent copy of the *Astrophysical Journal*. What is the nature of quasi-stellar-radio sources? What is the origin of cosmic magnetic fields? What are the relativistic properties of collapsed objects? What are . . . ? There is no end to them. The difficulty is not so much in trying to find the right answers to our questions. The chief difficulty is in making sure we are asking the right questions.

Lack of progress in a science is usually the result of stagnation in thinking. Workers labor diligently but to little avail. Their efforts to advance are confined to improving existing processes, or in doing the same things on a bigger scale. For more than a thousand years astronomers were chained to the notion that the revolution of the planets

around the sun could be explained by various combinations of circular motion around the earth. They persisted in trying to secure agreement between theory and observation, not by adopting a new theory, but by increasing the complexity of their old theory.

Sometimes an outsider can see a new line of attack on an old problem that would never occur to those closest to it. The image intensifier which has been applied with success to the photography of faint planetary detail, arose from a device developed originally to facilitate visual X-ray examinations.

If there are new problems in astronomy clamoring for solution there are still plenty of old problems whose cries have not been silenced. Many of these are of a nature that can be readily grasped by anyone with some scientific background. In such cases suggestions from outsiders may prove very valuable. The problems

I mentioned here are of no special importance or significance. They are merely some problems I have discussed and mulled over with other astronomers through the years. Another person would make out an entirely different list. I am going to lead off with one of a highly speculative and controversial nature, which belongs more to the realm of philosophy than astronomy. My only excuse for including it is that people ask me about it every year, and I run out of up-to-date answers.

WHAT WAS THE STAR OF BETHLEHEM?

There is only one statement you can make about the Star of Bethlehem with complete assurance. You can be sure that you are going to make somebody mad at you. I speak from experience.

We know almost as much about the Star of Bethlehem as we do about the constitution of Comet Schwassmann-Wachmann I, of which more later. In other words, practically nothing. The observational evidence can be set down very briefly. (If you ever give a lecture on the Star of Bethlehem be sure to ask your audience where it occurs in the Bible. Not one person in twenty knows and I'm not going to tell you here.)

"Now when Jesus was born in Bethlehem of Judea in the days of Herod the king, behold, there came wise men from the east to Jerusalem, saying,

"Where is he that is born King of the Jews? For we have seen his star in the east, and are come to worship him."

Herod sent them to Bethlehem where it had been prophesied that the Messiah would be born.

"When they had heard the king, they departed; and, lo, the star, which they saw in the east, went before them, till it came and stood over where the young child was. When they saw the star, they rejoiced with exceeding great joy."*

In seeking an explanation of the Star it is important to bear in mind that the Chaldeans were not chained to their television sets, but frequently viewed the stars in a sky free from artificial illumination and smog.

They were far more familiar with the stars than are people today. The wise men never would have made such an obvious blunder as mistaking Sirius or Venus or a fireball for the long awaited Sign. It is my opinion that there are only three types of objects worthy of consideration:

- (a) a nova or supernova,
- (b) a bright comet,
- (c) a close conjunction of two or more planets.

An essential point is the date of the Nativity. Most people naturally suppose it was A.D. 1 December 25. Actually the date is uncertain by several years. We could fill the magazine with a discussion of scholars' efforts to straighten out the tangled chronology of this event. Here it must suffice to say that Jesus was

* THE BIBLE: Designed to be Read as Living Literature. The Old and New Testaments in the King James Version, 1943. p. 936. Simon and Schuster, New York.

born in 6 B.C. plus or minus about 3 years.

If we are uncertain about the year the day of the year is hopelessly lost. The early Christians set the date of the Nativity all over the calendar trying to escape persecution by the Romans. According to one story, they finally hit upon the idea of holding their celebration when the Romans were very busy with one of their big celebrations. The one selected was the Saturnalia, which went on for several days late in December after planting the winter grain. The Saturnalia was a period of unrestrained license when even the slaves were allowed special privileges. How ironical to think that the date on which we celebrate the birth of Jesus was determined for us by an old pagan orgy!

a. *The Nova Hypothesis.*

A man may scan the heavens all his life and see only stars that countless others have seen before him. But tomorrow night he may see a star blazing in the Milky Way where no star that bright was ever seen before. Such an object is a nova, a previously faint star that for some reason suddenly increases 10,000 or even 100,000 times in luminosity. These are the "ordinary" novae which are fairly common objects. About a dozen were visible to the unaided eye in the first half of this century. A fast nova attains maximum in a day or two then fades slowly into obscurity again.

Much rarer are the supernovae in which the increase in luminosity may be 100 million times or more.

Supernovae have been observed which outshone all the stars in their galaxy. Only three supernovae are believed to have occurred in our galaxy in the last 900 years.

b. *The Comet Hypothesis*

Comets are common objects. At any time there are usually three or four somewhere in the sky. But they are *telescopic comets*. New naked-eye comets appear about once every two years on the average. A bright naked-eye comet is a spectacular sight that inspires fear and wonder. And comets bright enough to be visible in full daylight like the great comet of 1882 only come our way a few times in a century.

The most famous comet, at least the one best known to the public, is the one named after Edmund Halley who first predicted its return. Although its period of revolution around the sun is about 76 years it is regarded as a "short-period" comet, its periodicity being denoted by the designation, P/Halley. A period of 76 years would seem pretty long to most people, but it is "short" compared to comets with periods of 10,000 or 1,000,000 years. There is a record of a bright comet in the right part of the sky at about the right time for every one of the 27 returns of P/Halley from 1910 to 87 B.C. One of the earliest and best established apparitions is that of 11 B.C. Late in August of that year P/Halley passed near the stars Castor and Pollux. The latitude of Bethlehem is $+31^{\circ} 42'$. Two thousand years ago Castor and Pollux were approximately 32° north of the celestial equator. Which means that

sometime during the day P/Halley was in the zenith of Bethlehem—"the place where the young child was."

Recently it has been proposed that the successive returns of P/Halley be determined with an electronic computer back to 2320 B.C. We have always been much more concerned over Halley's comet in the past than its whereabouts in the future.

c. A Close Planetary Conjunction

On occasions when the moon, sun, or planets appear very close together in the sky they are said to be "in conjunction." (Rigorously when they have the same right ascension.) A famous German chronologist of the last century, Dr. C.L. Ideler, found that a triple conjunction of Jupiter and Saturn occurred in 7 B.C. He believed the first conjunction would have been interpreted by the wise men as the sign for which they were waiting, and would have started them on their journey to Jerusalem. According to his calculations, the third conjunction was so close that to weak eyes Jupiter and Saturn might have appeared blended into one star.

Comment

Of the three hypotheses the Triple Conjunction seems least convincing to me. With a planetarium instrument it is easy to reproduce this event very nearly as it must have actually appeared in the sky of 7 B.C. I have seen it many times and in my opinion would never have been mistaken for the sign. Since

the wise men were familiar with the motions of the planets it is unlikely that they would have regarded a triple conjunction of Jupiter and Saturn as a particularly noteworthy event. Triple conjunctions of these two planets occur about every 120 years so that they probably had been informed about them from records left by their predecessors. Later calculations revealed that the third conjunction of 7 B.C. wasn't nearly so close as Dr. Ideler supposed; in fact, Jupiter and Saturn were never closer than twice the diameter of the full moon. ALL the wise men could hardly have been so myopic as to be unable to distinguish between them. At the last triple conjunction in 1941, Jupiter and Saturn approached much closer than in 7 B.C., yet failed to generate any excitement that I can remember.

The Bright Comet hypothesis is also unconvincing on several counts. The bright tail is such an unusual and spectacular sight that there surely would have been some mention of it in the scriptures. Even when allowance is made for the uncertainty in the year of the Nativity, 11 B.C. seems too early to allow identification with P/Halley. Chinese astronomers are said to have recorded a daylight comet in 4 B.C., which at first would seem to be a very hopeful object. On the other hand, we know that Halley's comet was visible to the Magi in 11 B.C., when nothing extraordinary happened. If a bright comet appeared seven years later, why would they have been so sure that *this* was the long-awaited sign, and not another false alarm?

To me the Supernova Hypothesis is by far the most satisfactory of the three. A supernova closer than 10,000 light years would have been brighter than Venus, easily visible in full daylight, a truly wondrous object. Unlike the planetary conjunction or a bright comet a supernova binds us to no particular time. There is no difficulty over the time of day or the seasons, since we are at liberty to put the supernova anywhere we please so long as we keep it in the Milky Way. A supernova would have remained bright long enough to give the wise men ample time to reach Jerusalem. And Bethlehem is due south of Jerusalem only a few hours journey by fast camel.

The chief objection to the supernova hypothesis has always been the absence of any record of such an object. Now the sudden appearance of a new bright star is not the sort of an event likely to have been shrugged off as unworthy of mention. The Chinese and Japanese left us an excellent account of the supernova, or "guest star," of A.D. 1054, which has been identified with the Crab Nebula. Recently there is a report that the Chinese Academy of Science has gotten out a list of novae culled from old manuscripts inaccessible in the West, in which a probable supernova outburst is recorded in 5 B.C. This record if authentic would constitute the best identification for the Star of Bethlehem. But the information comes through Red China and there has been no way of verifying it.

It is astonishing what a profound

impression the Star has made on our minds when we consider it is only mentioned briefly in one book of the Bible. In southern California where I live Star of Bethlehems begin appearing about Thanksgiving and by Christmas the landscape is covered with them.

Now it is no surprise to an astronomer to hear that someone has seen a new bright star in the sky. A big observatory often gets a dozen calls a week from people with a Strange-Object-in-the-Sky story. To make it worse they generally include a good deal of their family history along with it. An object like the Star of Bethlehem doesn't rate at all with some of these sightings. I once answered a phone call from a woman who declared she had seen a "golden seahorse" in the sky. She assured me most emphatically that she wasn't drunk at the time. Nobody it seems had ever drunk in her family. Another woman claimed to have seen "two moons" in the sky. (She didn't drink either.) Still another insisted she had seen—not a flying saucer—but a flying "cube." Many of these individuals obviously are suffering from delusional insanity. But on the other hand there are some who sound rational enough and who become indignant if you intimate they probably dreamed the whole thing.

It is hard for me to believe that people today are any more proficient at seeing mysterious objects in the sky than were the people of former days. Being more space oriented today we tend to see vehicles from other planets, whereas people long ago inclined toward visions of saints

and angels. (The California Institute of Technology here in Pasadena once received a letter from a woman inquiring if it was true that the scientists at CalTech had a Christmas tree with *real* angels on it.) We wrack our brain trying to figure out some scientific explanation for a star reported to have appeared 2000 years ago. But are strange bright objects assertedly seen today any less deserving of an explanation? Suppose the golden seahorse women had been living in Bethlehem in 6 B.C.! Who knows what object might be shining over our rooftops at Christmas time?

THE LIGHT VARIATIONS OF MIRA CETI

More than 350 years have passed since David Fabricius, a Dutch clergyman and amateur astronomer,* noted the presence of a star of the third magnitude in Cetus, which was **not** on any of the star maps or in any of the star catalogues. It faded from sight in a few weeks and Fabricius supposed it to be another nova similar to the one Tycho Brahe had observed in 1572. Seven years later in 1603 Bayer saw the same star and designated it on his map as Omicron Ceti, without realizing it was the object previously observed by Fabricius. Later observations revealed it to be a variable star which reached maximum brightness at intervals of about 11 months, but was below naked-eye visibility for seven months. They

soon discovered that the interval between maxima might be long or short by a couple of weeks; also that the brightness at maxima varied considerably. At one maximum it became slightly brighter than Polaris but there were others when it barely rose to naked-eye visibility. The star was such a miraculous object that it acquired the name of Mira, or as it is generally known today, Mira Ceti. Mira Ceti has now been followed through slightly about 400 cycles since its discovery by Fabricius in August, 1596.

Although astronomers have accumulated a vast store of factual information on Mira, additional knowledge has not brought better understanding. Instead the more we learn about Mira the more mysterious it becomes. The feature that first attracted attention to it is still the most puzzling: why does it vary in brightness? Astronomers will tell you that it varies in brightness because its surface temperature changes. But this is about as enlightening as having a doctor tell you that you feel hot because you're running a fever. About all we can do is to continue observing Mira's erratic behavior and making hopeful guesses concerning their cause. In this respect, we are in the same position as a doctor who doesn't know the underlying reason for his patient's illness, and has no other choice but to "treat the symptoms."

In the early part of this century, however, astronomers thought they *did* know the reason. The explanation was embodied in the "Crust

* In former days practically all astronomers were "amateurs". There wasn't any other kind of an astronomer you could be.

Struggle Theory," one of whose proponents was W.W. Campbell, a former Director of the Lick Observatory. The surface of Mira was envisaged as a fiery ocean of liquid and vapor in roughly the same thermodynamic state as Circle VIII, Bolgia 8, of Dante's *Inferno*. Following an outburst the surface cools owing to loss of radiation into space, the flames subside, the vapors condense, and here and there masses of scoriae appear floating on the molten sea. The scoriae coalesce into a thin crust which spreads rapidly drastically reducing the light of the star. As the crust spreads and thickens the pressure from the hot gases beneath it begins to rise. The pressure builds until eventually the crust can no longer withstand it. Incandescent gases burst out all over the stars. Its luminosity soars. But the internal forces are soon expended, the flames subside, and the cycle begins anew.

The Crust Struggle Theory sounds fantastic to astronomers today. It seems incredible that it could ever have been given serious consideration. For now we know—or at least feel very sure—that red giants like the Mira variables are stars with enormously distended atmospheres of a density "low beyond our imagination." The thought of a *crust* forming over Mira is inconceivable. Yet the idea lingers on even today . . . except that the "crust" has been replaced by a "veil."

Astronomers prefer to believe that the light changes in the long period or Mira variables is the result of some pulsation process. The pulsation theory has been applied with consid-

erable success to the cepheid variables, which expand and contract "like the beating of a great heart." In a cepheid variable, maximum light and highest surface temperature occur when the star is expanding most rapidly; and minimum when contraction is most rapid. Unfortunately for the pulsation theory, the Mira variables operate on a different schedule: they are bright at the same stage when the cepheids are faint, and vice versa. I remember a model cepheid variable constructed for an exhibition at the Carnegie Institution in Washington, D.C. The "cepheid" consisted of a plastic balloon that laboriously huffed and puffed and changed color spasmodically as different colored lights went off and on inside it. At any moment the star was liable to quit pulsating and collapse with a long wheezing sigh.

It has been suggested that the light changes in the Mira variables are the result of a series of pulsations spreading outward to the surface of the star. The variations have also been attributed to great spots that fluctuate in size and number on Mira in a period of 11 months instead of 11 years as in the solar spot cycle. This is one of those theories that suffers from the fact there is no way either to prove it or disprove it and hence has never aroused much interest.

THE COMPANION OF MIRA

If we are puzzled about Mira it has a small companion that is downright mystifying. According to A. H. Joy of the Mount Wilson and Palo-

mar Observatories, who has been studying Mira for nearly half a century, the companion has a spectrum which is not like that of any other star. At the minimum of Mira in January, 1920, anomalous lines began to appear in the spectrum which led him to suspect the presence of an unseen companion. His suspicions were strengthened when the lines reappeared at the minimum of 1923, but he was unable to discern a companion owing to poor seeing. He communicated his suspicions to R. G. Aitken, a veteran double star observer up the coast at the Lick Observatory, and asked him to look for it with the 36-inch refractor. Aitken sighted it on the night of October 19, 1923, remarking that it was an "easy" double.

Mira A is deep red but its companion, Mira B, is blue, and so faint and close to A that it is plotted out even in the largest telescopes when the system is brighter than magnitude 8. There are indications that the luminosity of Mira B varies in a period of 10 years, although some observers have found evidences of changes in only a few days. Dr. Joy has told me in conversation that these suspected short-period changes are not based on any measures but are merely visual impressions. Little reliance can be put on such observations in a case of this kind where you have a faint blue image dancing around in the light from a much brighter red image. I asked Dr. Joy if some of the anomalous features in the spectrum of Mira AB might be due to the presence of another still fainter C star,

but he thought it rather unlikely.

Mira has probably been observed visually, telescopically, and spectrographically more than any other star. Amateurs often complain that there is nothing for them to do since everything in astronomy worth doing can be done so much better by professionals. But professional astronomers would have to spread themselves pretty thin to keep track of the several thousand long-period variables now in the catalogues. Amateurs can make a genuine contribution by recording every few nights their estimates of the brightness of certain selected variables of this type such as Mira Ceti.

THE TROJANS: ASTEROIDS OR SATELLITES?

In the science-fiction story and motion picture the minor members of the solar system display a remarkable facility for getting themselves captured and uncaptured and straying out of their orbits generally. Actually a body in free gravitational motion would seldom find itself in a situation that satisfies the special conditions for escape or capture. There is no record in astronomy where such an event is known to have occurred. Certain of the short-period comets such as P/Brooks II are said to have been "captured" by Jupiter, but the word is not used in the same sense that we think of the "capture" of a satellite.

We know of about a dozen objects in the solar system that are not bound to a planet as satellites, yet neither are they entirely free to revolve around the sun in independent

orbits. These are bodies that make up that interesting group of minor planets called the Trojan Asteroids.

It was in 1772 that Joseph Louis La Grange, in his prize memoir to the Paris Academy, gave the first particular solutions to the celebrated Problem of the Three Bodies. One of these arises when a primary planet and a body of negligible mass (asteroid) revolve around the sun in circular orbits in the same plane and with equal periods. If an asteroid moves in the plane of Jupiter's orbit at such a distance that Sun-Jupiter-asteroid form an equilateral triangle then the motion is *stable*. That is, an asteroid 60° from Jupiter at one of the triangular points will always be 60° from Jupiter. Two centuries ago when La Grange presented his memoir no bodies were known that satisfied these conditions so that the solution was regarded as being of academic interest only. On February 22, 1906, Max Wolf discovered an asteroid 55° east of Jupiter with the same motion as the planet. The following October another was found 60° west of Jupiter, and a third 60° to the east in 1907. After their orbits were accurately known, J. Palisa of Wien, suggested that they be named Achilles, Patroclus, and Hector, after the heroes of the Trojan War. At present 14 Trojan Asteroids are known, of which 9 are to the east of Jupiter and 5 to the west.

(Readers who are familiar with classical literature may be interested to know that there has been some infiltration into both camps. Hector, a Trojan, is over on the east side

with the Greeks, while Patroclus is found on the west side with the Trojans.)

Our concern here is not with the names of the Trojans, or their considerable departures from the equilateral triangle solution, but with their relationship to Jupiter's satellite system. Are the outer satellites of Jupiter captured Trojan Asteroids? Or are the Trojan Asteroids former Jovian satellites?

If the Trojans originated independently of Jupiter we would expect them to differ significantly from the 7 outer Jovian satellites. But if the Trojans originated from the same primeval material as Jupiter we should expect them to be essentially the same. The ideal way to apply this test would be to make a landing and inspect these bodies at first hand. For a long time to come, however, any inspection that is made will have to be from our station on the earth. The situation although not very favorable is still not altogether hopeless. In fact, there is one test we can apply immediately from data already available to us. We can compare Trojans and satellites relative to *size*.

These bodies are much too small and distant to enable us to measure their diameters directly. But we can get at their sizes through an indirect method. The sizes of the four largest asteroids have been measured and their diameters in miles found to be Ceres (480), Pallas (304), Juno (120), and Vesta (240). Now the distances of these asteroids from the sun and earth can be found at any

TABLE I

Sizes of Trojan Asteroids and Outer Jovian Satellites

Trojan Asteroids			Outer Jovian Satellites	
No.	Name	Diameter (Miles)	Name	Diameter (miles)
624	Hector	49	J VI	63
911	Agamemnon	43	J VIII	22
617	Patroclus	38	J VII	14
1437	Diomedes		J XII	
588	Achilles		J IX	10
1143	Odysseus	34	J X	9
1172	Aeneas		J XI	
659	Nestor	30		
1208	Troilus	29		
1583	Antilochus			
884	Priamus	28		
1173	Anchises	25		
1404	Ajax	23		
1647	Menelaus	15		

time from their orbits, and we can always measure their apparent brightness. Then, since their actual sizes are known we can determine the overall reflectivity of their surfaces of their *albedoes*. Hence a knowledge of *any three* of the four quantities—distance, apparent brightness, linear diameter, albedo—enables us immediately to calculate the *fourth**. We don't know the albedoes of the Trojan Asteroids and the outer Jovian satellite. But we can *assume* their albedo is the same as the average of the Big Four, and then proceed to calculate their diameters. The results for the 14 Trojans and 7 outer Jovian satellites can be found in Table I.

The average diameter of the 14 Trojans is 32.1 miles as compared

to 20.1 miles for the 7 satellites. If we omit J VI the average for the 6 remaining satellites is 13.0 miles. Notice that J VI is the only satellite larger than any of the Trojans. Also, that J VI and J VIII are the only satellites larger than the smallest Trojan, Menelaus. It is, of course, useless to generalize on the basis of such scanty data. For the sake of argument, however, assume that all 21 bodies originally were members of Jupiter's outer satellite system. Then all the larger ones escaped except J VI, who was apparently left behind to look after the little ones. Now assume that all 21 bodies originally were asteroids formed independently of Jupiter. Then it would appear that Jupiter has a strong preference for the smaller asteroids, for he has confined his captures almost exclusively to those in the lower brackets.

Such evidence as we have therefore, indicates that the Trojans and

*Albedo is defined as the ratio of the total flux reflected in all directions to the total incident flux. A fifth quantity involved called the phase function can be obtained from measures on the moon and inner planets.

Jovian satellites had an independent origin. But the answer is still far in the future. At present there is only speculation.

THE OBJECT KNOWN AS COMET 1925 II

In daily life our attitude is that the biggest is always the best. In science the situation is often reversed. Ask any scientist and he will tell you that the most interesting things are the ones that are just on the limit of observation. Percival Lowell said, that to him the canals of Mars, although insignificant in themselves, were the most impressive sight in the whole heavens. The same remark could be made of many other celestial objects, such as the faint companions of double stars, the distant galaxies, etc.

Certainly one of the most remarkable objects in the solar system is also one of the faintest. This is the periodic comet known as Schwassmann-Wachmann I, or P/1925 II, mentioned earlier. Hereafter in the interest of economy we shall refer to it as P/1925 II.

P/1925 II was discovered photographically by Schwassmann and Wachmann at the Bergedorf Observatory, Germany, in 1927. (It received the designation 1925 II because it was thought at first to be the second comet to pass the perihelion of its orbit in 1925.) At discovery it was about magnitude 14, far below naked-eye visibility. Like most comets when far from the sun, it appeared on the plates merely as a nucleus surrounded by a faint coma. In the normal course of events

the comet would move in toward the sun and begin to brighten up. But as soon as a reliable orbit became available it was apparent that this comet was never going to come near the sun. Instead of moving in an elongated ellipse like most comets its orbit was nearly circular; in fact, at discovery it was moving in an orbit that never brought it closer to the sun than 5.53 A.U., or 514 million miles. Now very few comets at the distance of Jupiter of 5.2 A.U. are observable at all. Hence it was obvious at once that P/1925 II must be a giant among comets.

Aside from its size, however, we would not expect P/1925 II to be a very exciting object. Sunlight stimulates a comet to activity. Upon approaching the sun it develops a tail, and may display jets, hoods, fans, haloes, and other assorted cometary phenomena. It may even split in two! But none of these would seem to be destined for P/1925 II. Rather it appeared condemned to pursue its lonely way through the cold of space scarcely distinguishable from a lowly asteroid. It just goes to show how badly you can be mistaken about a comet. For ever since its discovery this comet has been astonishing astronomers by its erratic behavior.

A single example out of many that might be cited occurred in 1946. Early in January G. Van Biesbroeck of the Yerkes Observatory found the comet extremely faint at about magnitude 18. But by January 25th it was up to 10.2, and on the following night he called it 9.4. Now a difference of 1 in magnitude corresponds to a change of 2.5 in brightness. It

works out that a change of 18.0 - 9.4 = 8.6 magnitudes, corresponds to a 2800-fold increase in luminosity.

But what could cause a cold chunk of matter suddenly to brighten up by more than two thousand times? Nobody knows. Whatever the cause it is still operating for in 1961 the comet flared up 200 times in brightness in only a week.

One of the earliest hypotheses was that old standby, an emanation from a large group of sunspots. On several occasions there have been flareups when a large spot group could have been "seen" by the comet. But there have also been flareups when there was nothing unusual on the sun. Furthermore, if a spot group can trigger flareups on P/1925 II, why can't it do the same for other comets?

Another suggestion is that the activity arises from explosive chemical reactions produced by unstable molecular compounds, such as CH, NH and OH. By assuming a suitable mixture of the right compounds it is possible to produce a violent chemical reaction, if (again) it is (conveniently) triggered for us by a sunspot. But as the proponents of the theory admit themselves, highly specialized conditions are required to produce an explosion of any kind, and it is hard to understand how they could exist on such an unlikely place as the nucleus of a comet.

Having exhausted all the "reasonable" hypotheses we might try some on the wild side.

Suppose that P/1925 II originated, not in the solar system, but in some

remote region of interstellar space. Chance brought it near the solar system where it was captured by Jupiter. But it still did not belong to the solar system. It was still an alien body in a hostile world — an Outsider. For it is composed of anti-matter. When our kind of matter and anti-matter come in contact they annihilate each other. ALL the matter involved is transformed into radiant energy, or at least we will assume so. The nucleus is under continual bombardment from meteoroids most of which are very tiny. But occasionally a big one hits producing an explosion of monstrous proportions observable from the earth.

The anti-matter hypothesis has several attractive features. There is no need for evoking a tie-in with sunspot activity which becomes particularly embarrassing at the minimum of solar activity when there are no sunspots worth mentioning. The flareups of the comet would occur at random as they are observed to do. Between flareups the comet would look about the same as an asteroid which is about the way it does look. The blast would react upon the nucleus and change its motion in essentially the same way that the flight of a rocket is altered by turning on its jets. From an analysis of about 200 observations of the comet made in 1961 there appears to have been a sharp discontinuity in its motion near February, 1930, corresponding to an impulsive change in velocity of one meter per second.

It would seem that an observation of the comet's spectrum during a flareup would give us exactly the

information we need to determine its character. Since we never know when a flareup is going to occur this is not an easy observation to make. So far three spectrograms have been secured shortly after an outburst. They show nothing but the spectrum of reflected sunlight, the same kind of spectrum we get from the moon.

Many other old problems might be mentioned if space permitted. Some thirty years ago we thought we had the answer in light pressure to the reason a comet's tail always points away from the sun. But radiation pressure was found inadequate and the theory had been abandoned. At present there is no generally satisfactory theory of

the formation of cometary tails. What causes sunspots? Why do they vary in a period of approximately 11 years? What is the cause of novae? Writing about a century ago Sir Robert Ball had no doubts whatever on this matter: a nova occurred when two stars collided. Now we know the stars could not possibly collide often enough to produce the number of novae observed.

A century or so ago a successful theory might have a lifetime of several decades. Now a theory may be demolished before you have time to get it into print. Yet the flood of papers continues. Never before in science has so much been written, by so many, that is being read by so few.

END

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AT THE INSTITUTE

by NORMAN KAGAN

Illustrated by MORROW

*This story is fiction, of course.
There's no such place as the
Grand Institute . . . of counsel*

I

My name is Kleinstein, not Frankenstein, but it was my feeling that we had created a monster which led to my assignment. I don't know that the President believed me. But he made me his special representative, with carte blanche, and gave me the use of an Air Force Mach-3

bomber to take me out to California, where the great brains grow.

One of them met me at March Field and conducted me to the Institute. He was a physicist, old enough to need a shave, young enough to need a complexion cream — and contemptuous enough to be a pure scientist. He did not like my reaction to my first sight of the Institute's

building. "What the hell kind of Golden Gate is that?" I cried.

"Golden Gate?" the young physicist snorted. "The main entrance to the Institute for Advanced Military Studies is a ring of solid metallic uranium."

"Isn't that rather dangerous?" I asked.

"It sure is," he said, smiling wickedly. "A torus of uranium is harmless in an air environment. But the human body is ninety per cent water. If someone tries to break into the Institute, he'll pass through the center of the doughnut, moderate the neutron flux, and destroy the whole place in a dirty nuclear explosion." He laughed at this, and rocked back and forth on his heels. "The best possible defense! In a way, it's symbolic of our whole strategy of massive retaliation."

I didn't say anything. I'm an applied man, an engineer. I don't think much of these pure research men, wasting good tax money with their wild ideas. "Finding out why the sky is blue" indeed! The proper place for scientists is behind a drafting board or in a blockhouse out on a proving ground, firing a missile. It's practicality that counts in this world, and that's what's rewarded. That's why I was the President's special representative.

That reminded me of my mission, and I grew a little cold with anger and dread. For the IAMS—the Institute of Advanced Military Studies at the Grand Corporation, the Pentagon's brain trust—had two hours ago recommended we retaliate

on every country in the world, whether they attacked or not.

Only the desperate, dangerous plan that the chief executive and I had concocted might save the situation. Suddenly the honey-colored California sunlight did not warm me. I looked at my guide, a G-C physicist with a pale face, horn-rimmed glasses and ill-suppressed arrogance. "But how do we get in?"

"Hmmm." The scientist looked over the situation. "Well, we could dehydrate—no, I suppose not. We'll go in the usual way, disguised as a machine."

He led me over to a tremendous device, a sort of tank aspiring to be a cyclotron. It was covered with silver coils and bus bars and winking lights and heavy-looking pressure tanks. He touched it, and a panel swung open. Inside, the tank was almost completely empty space, with room for a dozen more people. We rumbled forward on caterpillar treads.

"That door's an almost perfect defense," he yelled over the roar of the motor. "No spy ever tries to use one of these buggies. They seem to have an innate hatred and distrust of machines—what Auerbach calls the James Bond complex."

We rolled through the ring and down a ramp and through a dozen sequenced doors. The machine came to rest in an immense underground bay, completely filled with technicians working at endless benches. The physicist, whose name was Harris, parked the tank, and we climbed out. I found myself examining the complex array of apparatus on its

surface. As far as Harris had informed me, it had no purpose. I asked him about it.

"Next thing you'll want to know why we need gold-plating for satellites," he commented cryptically. "Now, Dr. Kleinstein," he continued, "I'd like you to meet our Operations Mystic, Guru Lester Moed."

Guru Lester Moed was a short, smiling man with white hair and eyes that twinkled. He wouldn't shake my hand, he just bowed and nodded. "Kiss the moon," he murmured.

I decided to ignore *that*, whatever it was, and listen to Harris. It was a little odd, though, meeting a spiritualist in the midst of all this science.

"Guru Moed is a combination of physicist, mystic, operations research expert, philosopher, and homicidal maniac. Grand is working with the Weiner hypothesis that fruitful ideas come from the meeting of divergent fields of study."

"Go clap one-handed!" the Guru snarled to no one in particular.

"The Guru is in charge of our, ahem, long-range projects. I have to fly to Washington now, so he'll take over your tour, Dr. Kleinstein. Our Civil Defense Group has come up with a fantastic new answer to the problem of post-atomic-war reconstruction. We're to build all new buildings with a central anode of the new collapsium metal. Then, after the building is vaporized, we put a current through the anode, and the vaporized particles of building come flying together and re-assemble themselves."

"It's a pity we can't do the same for organic constructs," he murmured, shaking his head. "But this new idea is better, in a way. Now all our plans can be based on the idea that the *enemy* will use neutron bombs. It makes everything simpler, now that we know our artifacts will survive. In fact, we're re-organizing the Civil Defense Program so the first purpose is maintaining the American Way of Life. That way we can get full support from industry. Just as long as all the consumer goods survive." He vanished, smiling, inside the tank. The motor rumbled and it rolled up the ramp.

"A fine young man," said the operations mystic. "A real son of Baal. Now, Dr. Kleinstein, let me show you one of the boldest and most imaginative of our programs for the defense and security of our nation."

Moed led me up some stairs to an observation deck, where I could look out on the entire laboratory bay. It was enormous, rows and rows of lab benches, stretching into the distance. At each of them a technician was working quickly, deftly, without hesitation.

"Most impressive," I murmured.

"Ah-ha," said the Guru.

"Tell me, sir," I said, after a moment. "These hundreds of scientists. I may be wrong, but it seems to me that they're doing, ah, almost the same experiment."

"Precisely the same," said the Guru.

"Well, that's fine," I said nervously. "But I didn't know the Grand

Corporation was running any training programs."

"We are not," said the Guru. "These technicians are all fully trained and qualified."

"Quality control?"

"Certainly not!"

"Then —"

"Ah, you see, then."

"No, I'm afraid I don't."

The Guru turned. His face slowly broke into a sunny smile. "You are familiar with the philosophy of science. You have heard the expression, 'a scientific fact cannot be proved, it can only be demonstrated.' A scientific fact cannot be proved, as a mathematical fact can. In mathematics, there is proof."

"Yes."

"Proof in science depends on Hume's notion that the present tends to resemble the past. That experiments can be repeated with the same results. But, you see, there is no way to *prove* that the present will resemble the past *in the past*. You see. And *that* is begging the question."

"Well, I'll agree to that."

"So you see the purpose of these hundreds of experimenters."

"No."

"Idiot!" he shouted. "Isn't it clear? They are checking up. If nature should change—if hydrogen should acquire another electron. or the freezing point of water shift a thousandth of a degree, we will know at once. And we will quickly relay the information to scientists across the nation. The experimenters, the scientists seeking new knowledge, can be secure. If their basic

assumptions shift, they will at once be informed."

I had to think about that one for a few moments. "Yes, but isn't it hard to keep track of all the assumptions of science?"

"Of course," he beamed. "We need thousands more of these labs."

"And don't they interact? I mean, if the freezing point of water shifts, and the characteristics of the metals in your thermometers change too, how could you tell—"

"Yes, there is that." The Guru mused a moment. "For a while, we thought we could keep the expenses down on the project by using the results of the science students in colleges and technical institutes across the nation. But it did not work out." He shook his head. "When we analyzed the results of *those* experiments, we found the universe was falling apart."

II

He smiled, and led me out of the bay and down a corridor to an office marked "Behavior Laboratory". He opened the door.

"Professor Block, this is Dr. Kleinstein, the young man from the President's special commission." ("Built like a brick meditation cell, isn't she?" he whispered.)

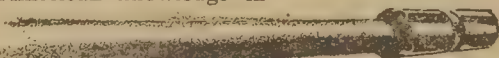
The Guru stood next to a tall beautiful girl, whose only flaw seemed to be a slight tendency to bowleggedness—as one of my City College chums says, pleasure bent.

"Happy to meet you, Dr. Kleinstein. You're in mathematics, aren't you? Well, I'm a behaviorician."

I raised my eyebrows and she grinned nervously. "I was trained as a psychologist, but I've branched off into psycho-cybernetics, meta-meta-meta-systems engineering, and the Euripides-Eumenides theory of continuous destruction of the universe. We're making so much progress here at Grand, we have to think up new names for our specialties."

All her branches looked great to me.

"I'd like to stay, Simone, but I've got to see the director," said the Guru, bringing me back to earth with a start. "We're setting up about a hundred Gamow printers—you know, machine that will print everything that was, is, or will be written in English. Like the old monkey paradox. We can use them to tap the totality of American knowledge in



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the entire cosmos. We're also buying some Turing Engines from I.B.M. They print only the truth — mighty handy for loyalty probes." He was out the door — no, he was in. "Tell Dr. Kleinstein about psycho-gynecology!" he cried, snapping his fingers. He disappeared.

Simone began to walk around the lab nervously, throwing her body around. Personally, the only girl scientists I like are in paperback books, except for a certain girl chem major at City, but it's a funny thing about these pure researchers. Quite a few of them have these nervous gestures. I knew a mathematician who'd keep putting chalk into his mouth during class, then shrug it off; "Got to quit smoking." Then there was a plump astronomer who'd always be scratching his head while

reading. His dandruff showered into his texts, an unconscious deification and value judgment. Then there was a biologist who liked his experimental animals more than people.

"You're concerned with applications of psychology to the defense of our nation," I said. "I heard a story there was a project to shift the opinions of the Russian leaders by telepathy."

"That was wishful thinking," said Simone Block demurely. She brushed her crow-black hair back from her ivory forehead, and sighed. "It didn't work, though." She shrugged. "Most behavioricians have a sneaking belief in psionics. I used to have faith in teleportation, but it never got me anywhere."

She paused. "You have full clearance?" She took a deep breath.

I nodded. Boy, she was built like a *real* brick meditation cell — better than J. D. Salinger's.

"Well, then, you know the latest theories. The Grand Corporation has given up hope of avoiding nuclear war. The main project of this department is making alliances with the animal kingdom. Kahn's group has calculated that a major conflict will bring us to the point where the friendliness or enmity of the beasts is of decisive importance."

"All right," I said.

"The Dolphin Contact Project has received a lot of publicity. There's also a group in the Netherlands trying to make contact with the lemmings. Similarity of mental behavior is theorized. My own work is concerned with befriending the rat."

She led me over to a cage. Close up, I saw it was two cages adjacent to one another, a rat in each. The first rat had a switch he could close, the second was strapped into a tiny harness that was slung from a mechanism on the roof of the cage. "Watch closely," said Simone. "The experiment, I mean."

She touched a switch. A motor hummed, and the harnessed rat began to rise into the air, struggling and squeaking. The harness held it so well it could not free itself.

The first rat ran to his switch and closed it; the motor stopped and the second rat fell back into his cage. He whined and frisked for a few moments, then became quiet.

"See, see," said the behaviorician. "Rats are altruistic. The first rat had nothing to gain by helping the other. They have nothing in common. It proves it. Rats are altruistic. Rats are human." Her excitement persisted a moment, then lapsed into gloom. "Okay, now part two," she muttered.

She walked to the corner, where a moving picture projector was mounted. She switched off the lights, and set the machine awhirring. On the screen, a man was standing on a scaffold his head in a — in a —

"What the —"

"Actors, they're actors!" said Miss Block, as I allowed her to hush me furiously and intimately.

I couldn't turn away, even when the figure began to kick and squirm. Finally, purple-faced, it went limp, and Simone Block turned off the projector and motioned me over to the cage.

The rat was placidly cleaning his whiskers with his tongue. The switch was untouched.

Simone's head slumped till her chin rested on her, uh, chest. "Darn you, darn you," she cried, hitting the cage with her tight little fist. "Why can't you be human?"

I patted her shoulder. "Try dogs," I murmured.

She looked up. "Oh, yes, that's a wonderful idea."

I soothed her, a process which quickly became most pleasant, and made me somewhat late for my appointment at the next part of the Institute, the Sociology Section. I walked there on my own, musing.

III

The corridor was almost cylindrical, colored an odd, foggy gray, the ten-year-old Hubbard Sperm Dream decor. Most of the Institute for Advanced Military Studies was underground. I tried to look up past the roof and air into the sky, where the Orbital Incendiary Barrage swung round the earth. The O.I.B. system had been finished just last week, several hundred tremendous, multi-gigaton hydrogen bombs in low, high-speed orbits. It was considered quite an improvement over the old intercontinental missiles, which took half an hour to do their work. Now the President could push his button, a computer would figure out which bombs were over the enemy and detonate them, searing the opposition to nothing. The fifteen-second war.

Which might take place in less

than two days, unless the desperate plan we'd worked out worked. What I'd seen of the installation didn't look good. Pure research, pure research! Oh, I know all the stupid arguments about serendipity and amazing applications turning up. But these are based on the science of centuries ago, when only great minds were allowed to follow their fancy. So now give everyone a free hand! The trouble is that in most ages, the major part of the science done has been bad, or wrong, or trivial. What these pure research jokers really want is freedom from responsibility. If you're an engineer and you build a bridge, that bridge mustn't fall down. If it does, you're in trouble. But your pure researcher has no such obligation. If he doesn't discover anything, or finds out apparently trivial things, who can censure him? Who knows what wonderful use this apparently silly garbage will be put to in the centuries ahead? Of course, I don't believe most of these people thought that way, at least consciously. But it's awfully easy to kid yourself along, or more tragically, become disoriented and lapse into harmless mania. Most people's minds aren't to work without restrictions.

I opened the door lettered "Sociology Section". There were two young men in the room, seated at desks facing one another. Both of them looked up.

"I'm Dr. Dykon."

"I'm Dr. Jayne."

"I'm Dr. Kleinstein, of the President's special commission."

We all shook hands.

"I'm very pleased to meet you, Dr. Kleinstein," said Jayne, still seated, "though I was a little surprised to find that you're only a Lemma."

"Pardon me?" I said.

"You must excuse Dr. Jayne," said Dr. Dykon quickly. "He's a sociologist, and is used to talking about taboo subjects in open scientific terms. I mean, he thinks it's perfectly natural to discuss a man's sex life in front of him."

"Huh?" I said. "What do you know about my sex life?"

"Everything," said Jayne. "The F. B.I. has records of all government employees, and special corporations like the Grand have open access to all of them."

"All right," I said. "What do you know about my sex life?"

"Just what I said," said Jayne. "You're a Lemma."

"What's a Lemma?" I said hotly. These two fuzzy-subject men were getting me riled.

"Excuse me," said Dykon. "But I understand you were an engineer. Surely even a scientific barbarian like you has had *some* mathematics? You mean you don't know what a Lemma is?"

"Of course I do," I replied. "A Lemma is a minor proof, less important than a theorem, more so than a corollary. How do you boys rate?" I asked.

"Oh, I'm only a Lemma myself," said Dykon dryly. "My inductions never seem to work out."

Jayne sniffed at him. "I'm a theorem," he said proudly. "I Q.E.D.'d only last week. Though you might say that it was 'proof by notation'."

Dykon laughed at him, and twinkled his mustache. The two men were middle height, standing in the center of their vaguely spherical room. I recalled a medical textbook illustration from when I was twelve: not spherical; womb-shaped. And their desks were vaguely organic.

I stopped *that* line of speculation very quickly.

Dykon was laughing. "Anyway, that's better than 'proof by notation'." he snorted.

"All right, gentlemen," I said, breathing deeply. "I'd appreciate hearing a little about your department."

"Our section," said Dykon, "is charged with the scatologi—I mean sociological aspects of defense and security."

"Oh, if only I could be an Axiom, like Hugh Hefner," cried Jayne to himself.

"Go on," I gritted.

"It is a consequence of the Fundamental Theorem of Mathematical Sociology, the FTMS, that the sex drive doesn't exist."

"What?"

"Why, of course," said Dykon quietly. "Sexual activity is just a consequence of the need of our social structure to perpetuate itself. Why, without civilization, the human race would be extinct in fifty years."

"Never mind, never mind."

"You see, with civilization quivering on the edge of extinction, it becomes necessary to excite the sex drive. For under sufficient necessity, cause and effect may be reversed, effect reaching into pos-

sibility to drag its cause into the plenum. Consider the 60-dimensional pseudo-mathematical model of the — ”

“Spare me that!”

“It’s very difficult to increase the sex drive,” whined Dykon. “Rationally, the effect of bringing up children just isn’t worth it. Civilization means sterilization. Our society reflects this. The most civilized, the most scientific media, have no sex in them at all. I couldn’t find a single foldout in the *American Physical Review* the other day. Even science-fiction magazines — ”

“That’s enough about sex,” someone muttered.

“Well, then,” said Jayne quickly. “There’s our attempt to revitalize religion. You know the way science is our cultural hero, the miracle worker, the twentieth century god?”

I nodded.

“Well, you’ll have to talk with J. B. Priver of Interplanetary Figuring Out Devices about the early church. But as to our efforts — did you ever wonder,” he nudged me, “why all our weapons have the names of Greek and Roman Gods? And why astronauts are, in all respects but the technical ones, just ordinary guys, family men with kids, and in their thirties at that? Did you ever wonder why current nuclear clouds are no longer erect, phallus-like mushrooms, but are hemispherical — womb-shaped?”

“It isn’t easy,” muttered Dykon. “We work hard to get the defending, safeguarding missiles named

Nike and *Nike-Zeus*, then those Air Force jokers come along and call them *Snark*! But we’re gonna get the anti O.I.B. laser installations called *Hera’s*. That’ll show ‘em!” He concluded, looking smug.

“And they always name the most destructive ones best—*Atlas* and *Titan* and *Jupiter*. It’s like when the military thought about God, they thought of a terrible, wrathful killing, smashing, raping, destroying monster. I heard they’re going to call the O.I.B. system *Jehovah*.

“And the Navy, too!” cried Jayne, shaking his head from side to side. “They got all mixed up, naming our hidden, elusive, strike-without-warning nuclear subs after great open patriots!”

“Uh, yes, well, I see,” I muttered. “Is there another department around here that I can have a look into?”

“Try Applied Mathematics down the hall,” said Jayne over his shoulder. “Old Priver will tell you about the church. Now, Dykon,” he said, turning away, “I’ve got a wonderful idea for a psychological warfare weapon called the ‘mind bomb’. You see, the best an old-fashioned neutron bomb can do is leave buildings and machines intact, and just destroy the people. The mind bomb’ll leave the machines and the people’s bodies alone. It’ll just turn them into zombies that’ll do whatever we want.”

“I guess the perfect weapon would just leave everything alone,” Dykon speculated.

“Are you nuts? Now, this ‘mind bomb’ idea—”

IV

I tiptoed down the corridor to the door lettered "Mathematics Section," sighed, and paused. I knew the Grand specialized in applied math, computers, and so forth. Now, if anything had to be logical, it was math. Surely here—

The door opened, and a ruddy faced, beaming man smiled out at me. "Dr. Kleinstein? J.B. Priver here. Welcome aboard!"

He shook my hand vigorously, and motioned me into an immense room filled with quietly humming machines and blinking lights. The Mechanisms stretched away into the distance.

"Boy, Litter!" he cried.

And to my amazement four young men trotted up with a litter. None was older than seventeen, but they were nearly identical; crewcuts, slide-rules, horn-rimmed glasses and two dozen I.F.O.D. cards. They lifted the litter and bore us off down the corridor between the enigmatic machines.

"If — uh! If — uh!" they chanted.

"Programmer boys," nodded Priver. "Haven't even taken their first vows."

"What's this 'If—uh' business," I said, trying to be friendly.

"Our new slogan," said Priver. "It used to be 'think', but we decided this is closer to the way our minds really work." I noticed the boys with one hand free would slap their foreheads on the 'uh's'.

"Excuse me," I said. "Dr. Dykon and Dr. Jayne said something about a scientific church."

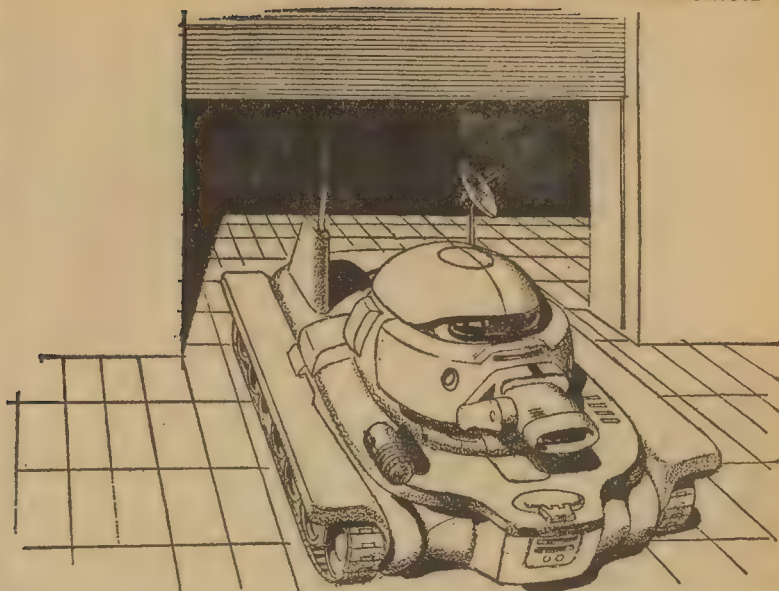
"Huh!" said Priver. "You can tell all the top government secrets you like, but that's *Company Confidential*!" He paused, and looked me over. "Well, I suppose you're All Right," he muttered after a moment in an Organization Man drone.

"Actually, the idea started about five years ago. We had experimental classes at our New York Figuring Out Device Center, for high-school kids. You know, the bright science types from the Bronx High School of Science, Stuyvesant and Brooklyn Tech. We could spare the machine time, and the kids were eager to do anything to learn. Like most bright young people, they thought their high-school teachers were stupid morons and had nothing to do but abuse and laugh at them.

"Naturally, the program—I think the publicity department called it the Science Honors Program—wasn't gratis. The National Science Foundation paid us plenty for the machine time. The public relations value was good—helping the scientists of tomorrow—and the little jerks would gladly do the dirty jobs our fancy Ph.D.s wouldn't handle.

"I kept track of a few of the brightest of 'em, just for my own amusement. It was surprising how many went into math and electrical engineering and physics and so forth, and wound up working for I.F.O.D.—and they were some of our best.

"So I got this idea. If we get 'em young, impress 'em, scare 'em, challenge 'em, the bright kids would



wind up working in science—and working for I.F.O.D. Take a smart little kid and work on him a little, it's surprising what you can get out of it when he grows up."

"Didn't anyone notice?"

Priver's jaw spread in a fat grin. "Notice? They pushed 'em into our arms! You should see these twelve, thirteen-year-olds kicking and clawing to get into our special classes. And their mothers, screaming if Johnny can't get into the special advanced math class that trains him to be a slave for I.F.O.D.!

"And by the time a few of 'em realize what's happened, at twenty or twenty-five, it's too late. They can't get along with people, can't have friends. People laugh at them. They're crazy problem-solving machines. What can they do but be

slaves for a dozen multi-megabuck companies? That's what comes of worshipping brainwork!"

The litter moved down the aisle and stopped before a complex of offices. The boys set us down and went off. "Well, now," purred Priver. "Let me tell you a little about our operations for the Grand Corporation."

"Sure," I muttered. "Tell me about how you're upholding the ideals of freedom and democracy!"

"Democracy?" said a slack-jawed copy of the litter boys. "I.F.O.D. has shown democracy is unworkable."

"Sure," slobbered Priver between thick lips. "You don't think a corporation ignores the governmental system it works in, do you? Show

him the results of the computer study, Dressler!"

The IFODope shut his jaw and raced into a cubicle. A minute later, he came out with a thick file folder.

"Good work," said Priver. "Keep it up and maybe we'll save you for breeding stock." The young man began to cry.

Priver shuffled through the file, grunting in annoyance. "Here 'tis," he mumbled, pulling a small piece of paper out of the mass. "Arrow's paradox."

I looked at it.

1st person	C	>	A	>	B
2nd person	B	>	C	>	A
3rd person	A	>	B	>	C

"What does it mean, though?" I asked.

"The inequality signs are preferences. The first person likes C more than A, and A more than B, so he likes C more than B."

"So?"

"Take a long look. You'll see two people like A more than B, two people like B more than C, and two people like C more than A. So you see—no one can settle anything by a vote!" He smiled at me triumphantly.

"Wait a minute," I cried. "I'll grant that there's a paradox, but how can—"

"The machine is right, the machine is right!" the young man called Dressler cried, dancing around the control room.

"Hold on," I said. "How about that? You can't say that machine-

like principles can be applied to men. Machines aren't even as good as men. They can only allow for built-in factors. They can only follow their programmed instructions. Take that chess machine," I said, my voice growing hoarse, "the chess machine I.F.O.D. built for demonstrations. It could always win, but only by the rules that were built in. When its human opponent cheated, the machine lost!"

Dressler screamed and threw himself to the ground, shaking.

"That was only the show model," smiled Priver. "The one we used with trainees like Dressler operated somewhat differently. We took a hint from a man named Ambrose Bierce. The machine our trainees played won every legitimate game. But if a trainee cheated and won, the machine reached across the board and strangled him to death!"

"Oh, machine, my mighty, mighty machine!" whispered Dressler, with an ecstatic look on his face.

I stared at him a moment, then helplessly looked away.

"You don't seem to be too sympathetic to I.F.O.D.," said Priver dryly.

"Perhaps I'm not," I admitted. "But one more question. You seem to be training your technical staff to be principally loyal to your machines. How can they tolerate human management?"

Priver smiled. "We don't call our management computer the Maizel Machine for nothing," he said cryptically, and gestured. "That's about all. The Public Relations Department is just across the way."

V

I stepped out into the corridor and found myself surrounded by mist. I realized I was in a "think chamber," a room designed to deprive one of all sensation, and so to speed thought. At this particular time, I could use it.

The situation at Grand seemed to be much worse than our greatest fears in Washington. Pure research! To some minds it's worse than brain washing, castration and sensory deprivation combined. I'm no psychologist, but I can spot a complete schizogenic when I see one. The syndrome is a new one, typified by complete absorption in abstractions, symbols and patterns, combined with rejection of the physical side of life, specifically the body and the emotions. No love and sex for them. Rational? Of course they were rational, but rational doesn't mean sane! You could see it in some of the top Pentagon planners, a pinched, worried, nervous, hateful look.

I'd met the type before, when I went drinking with science majors at college. Maybe some of the girls were snobs, the long hair and thongs sort especially, preferring someone they could discuss literature with to a barbarian with a sliderule. But God, you should have met some of those guys! I read *On Thermonuclear War*, but I never joined a Herman Kahn Fan Club, or wore a button that said "Let's Build Domsday Machines for a Strong America". It was awful to listen to those guys, it was Death on a white horse.

The theme of their discussions seemed to be, "No One Will Go Out with Me, So I'm Going to Blow up the Earth".

Maybe it was love. No one would love those guys. Perhaps we should have psycho-tests for the war planners, the way we do for astronauts. Ellis said that "Virginity, especially when it is prolonged and taken to extremes, seems to be the true enemy of love (and often engenders deep-seated hostility to others)." Rationality isn't enough, not when a psychotic blow-up of a key official can sterilize the Earth.

And again, pure research! Pure, abstract, symbolic, unconcerned with man and his world and his body. No wonder they were half-crazy!

I pushed open the door to the room marked "Public Relations Division". A middle-aged man looked up at me, his desk crowded with all sorts of manuscripts. "You're Kleinstein," he said flatly.

"That's right," I replied. "But I didn't know that the Grand Corporation had a PR section."

"It's a matter of definition," said the man, lounging back in his chair. He closed the manuscript he was working on, rolled down his sleeves and brushed at a few strands of hair that covered his bald plate. "Semantically, you might consider this the Sales Division."

I raised an eyebrow.

"It's like this," he said. "It's my job to convince the country it needs useless, expensive boondoggles like the Grand Corporation."

"But patriotism—"

"No, no, no. Can't depend on *that*. We use the two *basic* emotions of any normal human being—hate and fear. Oh, we were primitive in the beginning. All we did was work these screaming, shuddering sirens once a day, at noon, to remind folks that if they didn't keep paying and paying, they'd be fried to death on their own sidewalks." He shrugged, and grinned. "Crude, I'll grant you.

"But we're far beyond that," he cried, his eyes lighting with enthusiasm. "We've decided to work through the mind, to use books and movies to bring the point across."

"You mean school texts or pamphlets sent, through the mails?"

"No, no, no. Real Literature. See these," he said, holding up two best-sellers.

"In this one, a wicked defense Department nearly takes over, but is stopped at the last moment by a feeble chief executive. See, we get them to both fear and hate their own government. Schizophrenic. Very superior to the idea of some external enemy, which is *passee* anyhow. *Everyone* knows subversion is the real threat. Once you get that sine-wave of hate-fear going, it builds up to destroy a person's whole psychic structure.

"This other one is even better. Here, because of mechanical failures—no one is to *blame*—the U.S. government has to H-bomb New York. The president himself gives the order, though he hates to. Ha! New York City, see, not the Deep south or Arizona. The place where all those damn intellectuals hang

out. This ought to terrify 'em a little, at least subconsciously. And I think that's the big reason the rest of the country liked it so much."

The PR expert leaned back with a sigh. "These books are easy to write. The basic notion is the idea-as-the-hero, and we both know what the idea is! One of our experts said you mustn't dislike the planners that think up concepts like this—that'd be as silly as those old Asian kings, who killed messengers who brought bad news." He wrung his hands a little, stretching. "The real situation is a lot closer to Germany after the World War—people today are under a terrible strain, and feel naked and helpless. They'll seize any ideas that might work, the wilder the better. That's why the gas chamber and concentration camp notions went over so big. People couldn't really comprehend them, and were desperate to try anything. Ideas like that don't occur to normal human beings.

"Of course, that's all rather direct, compared to some of our more general products, which work on building up a fear-hate of mechanical civilization. We instigate those stories where the single lonely operative defeats the whole technological - organizational - scientific enemy. The reader identifies with the spy, so subconsciously he does single battle with the society we teach him to despise. Of course, he realizes he can never *really* defeat the enemy, and so just really suffers all the terrible tortures we can think up.

"That's all below the surface," he muttered, tapping his skull with two fingers. "Really, these books are the easiest things in the world to write. You just exaggerate. Take this one I'm working on now." He held up a thick typescript. "I drive a 1958 Rambler, so Agent X gets an Avanti Super American. I eat hamburgers at Wimpy's, so Agent X has chateaubriande in Mexico City. My checking account is overdrawn—agent X stops a plan to rob Fort Knox. Kids were setting off cherry bombs on my block last week—Agent X has to find a stolen atomic weapon." He began to pound vigorously at his typewriter as I tiptoed out of his office.

VI

"Philosophy Department" said a rather small sign on a rather small door, "Tyrone Levi—Prime Philosopher". I pushed on in.

Tyrone Levi was a large, cadaverous man with pale blue eyes and very bad, horribly stained teeth. "Greetings," he mumbled as I walked in. "Seeking out the philosopher's stone—or perhaps the stoned philosopher! Haw, haw, haw — brumph, brumph, brumph, cough!" There was a large bottle on his desk.

I sat on the edge of it. "What's the purpose of having a philosopher here?"

"Oh, I don't know," complained Levi. "What's the purpose of the universe? Seriously, right now I'm trying to justify the notion of responsibility."

"Huh?" I said. "Why? And what for?"

"Ve-ery important, now that we're setting up for Project Turnabout."

"I've never heard of that one?"

"No? Not Project Turnabout and the new concept of Passive Retaliation? Very interesting idea, even though a barbarian engineer like you wouldn't get it."

"Try me."

"Very well. Project Turnabout is the first implementation of our new concept of Passive Retaliation. Operationally, several very large booster rockets will be affixed to the earth's surface along the geographic equator. Upon detection of enemy missiles, Turnabout Control will be informed, and the rotation of the planet will be adjusted so that when the trajectories of the missiles intersect the earth's surface, they will land in the country from which they were dispatched. Passive Retaliation!" He said with a dramatic flourish.

"But what does this have to do with philosophy?"

"Not much, really," he murmured, taking another long pull from the bottle while a tear coarsed down his cheek. "I thought philosophy would be interesting and exciting, but it turned out to be such a stupid bore that only old goats like me could stick it out through grad school."

I'd lose him in a minute if I wasn't careful. "Quickly, what about responsibility? How will you justify responsibility in relation to Passive Retaliation?"

"Ah, the justification of responsibility," cried Levi, leaning back. "A typical wonderful argument from philosophy. You see, ever since the overthrow of the Heisenberg Uncertainty Principle, we live in a completely determined universe. Every effect has a cause." Levi was strangely patient and methodical as he went on. "But then, you see, how can we hold people responsible for what they do? It's like holding a machine responsible for breaking down and killing its operator. It doesn't make any sense!"

"But we do hold people responsible," I said hotly. "We put criminals in jail!"

"Ah, you mean Mill's Utilitarianism. We hold people responsible for the subsequent effect this will have on them and on others. But if everything is determined, whatever will be will be, why bother?"

I got sick of philosophy in my second year in school, and I got sick of Tyrone Levi faster than that. Starting with his mouth and working up. "What difference does it make?" I muttered sourly.

"It makes a difference," said Levi savagely. "How can I hold anyone responsible for my rotten life? Ah, I know!" his eyes burned brightly. "The strict revenge concept—punishment solely because I think their acts must be punished! That's all that matters!" He scrabbled in a drawer of his desk and pulled out a pistol. "Q.E.D." he said softly, and darted away into the corridor.

I waited a few minutes, then carefully opened the door. There was

no one in sight. The door directly opposite read "Director—the Institute for Advanced Military Studies."

I took a few moments to calm myself, breathing deeply. The idea of things we'd gotten back in Washington was more than confirmed. The Grand Corporation had been totally ruined by the concept of pure research. The situation was irreparable.

There was only one thing to do, but I hated to do it. It was such a terrible waste. We'd sunk more megabucks into Grand than we'd blown megatons in bomb tests. But it was necessary. Still, I wondered if I could bring it off. I was an engineer, a grubby practical person. I didn't really understand these high-powered theoretical types. But there was nothing for it. I took a slug from Tyrone Levi's other bottle, squared my shoulders, and entered the office of the director of the Institute for Advanced Military Studies.

I was underwater! No, no, that was a crazy first impression. The room was dimly lit, damp, with mist floating in the air. It was approximately spherical, and in other ways resembled the office of the Sociology Section. The walls were dim and red. They pulsed mildly.

"Dr. Kleinstein? I'm the director."

VII

The director was a small, chubby man who didn't seem to be wearing more than shorts. He sat behind a somehow organic-looking desk. His head was much larger

than it should have been, and gave him the appearance of a prematurely aged baby. A vein pulsed at his temple. His voice was mild, lisping, cheerful, but his eyes were dark with mistrust.

I had to get this man to like me. I took a deep breath and counted three. Perhaps an honest, direct approach would work best. "Mr. Director. I'm a straight shooter—"

"Are you threatening me?" he screamed.

The walls flashed violet, and seemed to quiver. A deep, angry roar moved through the room. I found myself thrown to the floor—it had *rippled*!—and covered by a dozen needle guns, laser death rays and Californium rifles. They last used californium for the fissionable material, which lets them fit an A-bomb into a rifle-shell.

"No, no, no!"

"That's better," he twinkled. "Be nice."

I covered my face with my hand. "You have pretty good security," I murmured.

He smiled, and a few of the weapons withdrew into the pulsing, heaving walls. "Oh, yeth," he lisped. "They are very good toys."

Oh, oh, I told myself, breathing shortly and rapidly. I see how it works. This is not what horror is. Horror is fear without reason, and this is reasonable; I understand weapons, I even thought I was beginning to understand the director. I lay there, gasping, calming myself.

"You like them," said the director, smiling. "See, I have other nice things. See the pretty pictures."

On the far side of the room an enormous abstraction scanner lit up, a crystal sphere in which clouds of color and points of flame moved vaguely, shot through with occasional tracteries of fire or blackness. I didn't know the coding. It could've been the socio-sexual synthesis of the state of Pennsylvania, or the defense network of the North American Continent. I was pretty sure it was the defense network of the North American Continent.

"A womb with a view," I murmured, not too softly.

He giggled. The walls pulsed warmly. It was now or never.

I took a deep breath. All that money, all that time, all wasted! But before I could speak—

"Did you come here to see me, all this way, about out latest set of recommendations?" asked the Director, his voice trembling. "It's what we have to do!"

Quickly, before he could get himself worked up! "Yes, director, it's about your last set of recommendations. We are very pleased with them. Very *very* pleased. I mean, we have decided the Grand Corporation is too good for the job it's doing. Too fine. Too pure—"

"Pure?" said the director. His face wore a funny smile.

"Yes, yes, too good, too kind, too *pure*." I let my shoulders slump, sniffled, and wiped away a tear. "I know what you think of me, Director. I'm just a dirty old mechanic, right? A tinker, a grubby old moron." I let my lip tremble.

"Oh, don't feel bad," said the man with the big head.

"Yes, I know. But even a dirty old engineer like me can try to understand what you noble *pure* scientists are trying to do. I can try, can't I? Oh, forgive me."

Forgive me? His nose was so high I doubted he could *see* me.

"Yes, we grubby engineers, we silly clerks, we can try to show our gratitude for what you *purists* are doing."

"Oh, that's all right," said the Director.

"And so," I rose and stood at stiff attention, "it is my duty to announce that the Grand Corporation is to be removed from the Defense Department, and placed under the Bureau of Standards as the government agency charged with the study of *pure* destruction."

"*Pure* destruction," purred the director musingly. Then, abruptly; "but what is that?"

"Pure destruction is similar in approach to pure mathematics, pure physics, and the other pure disciplines," I stated, my eyes raised in reverence. The room darkened slightly, then brightened. "The pure sciences are concerned with themselves for their sake alone. Without reference to human needs. Pure mathematics is done for the sake of esthetic satisfaction. So with pure destruction."

"Pure destruction will not concern itself with humanity. It will study extinction for its own sake, decay in terms of itself. It will chart and systematize and compute disruption, dissolution and waste throughout the universe. It will learn

to nullify, demolish, upset, subvert, dismantle, blot out, overwhelm and obliterate. It will discover new methods to smash, ravage, gut, prostrate, put an end to and make mincemeat of. This, Director, is your new purpose!"

"Charming!" glowed the director of the Institute for Advanced Military Studies. "How pure! How unsullied by base humanity. I can just see us now, on the real frontiers of knowledge—laying waste, obliterating, overthrowing, annihilating, doing away with, wiping out—"

He was so happy I let myself relax. I'd done it! And a mighty close call, too.

I tiptoed out the door and made for the torus-shaped ring, rehearsing in my mind my report to the President. He would be pleased—naturally enough; I'd pulled his chestnuts out of the fire for him. There would be a reward in it for me.

And I knew just what reward I wanted.

No more billions poured into a rathole like this one. A *sensible* institute. Run by *sensible* men. Devoted to logical R&D goals instead of blue-sky "pure" research. Something that would give our nation the sort of four-square, practical military science it needed. And most important of all, a man at the head of it who would not let himself be sidetracked.

When the President asked me what name I would suggest for the directorship of the new institute, I would have it on the tip of my tongue. Mine. END

CYCLOPS

by FRITZ LEIBER

*Something was out in space
that did not belong there . . .*

As the *Flea* fell out of Moon's shadow into sunlight, its frame and skin began to squeak and ping from the sudden heat, like an old aluminum house at dawn. To the three crewmen of the *Flea* it was a welcome relief to the silence of free fall, although only five minutes had passed since *brennschluss*. This was starting out to be an eerie jump. The stars through the big curved space-screen looked like spiders' eyes in a vast black nest.

Of course Pyne or Allison or Ness might have spoken or nummed or even jingled in a close-cupped hand

some coins or lunar curio-nuggets. But there are times in space when such deliberate sounds only intensify the silence, like whispering in a haunted house. Everywhere you see double stars like eyes and you almost think that the spiders are at last going to spring.

The sun's fierce ion-lashing rays, striking *Flea* from behind, didn't make the tiniest highlight, only some faintly milky patches where the screen was dust-peppered. It may have been only these false nebulas which determined the remarks Ness ventured, now that the ship herself

had cleared her throat with her pongings and creakings, like some crusty four-star captain indicating speech was permitted. Ness himself wasn't clear as to what had touched off his thoughts.

"I wonder if there was Life before Life," he said. "I mean in the soup of a stellar-planetary system forming from the original whirlpool. There'd be all the needful elements in the dust, I'd think. And then suppose the heat of an older star—a close double—or of a premature atomic flickering in the central mass struck out and bred those elements. That could have happened here, you know. Pluto may be the cinder of a white dwarf."

Allison shook his head, though his gaze shifted toward the great nebula beside Orion's sword. "You'd never get the right ecospheric conditions," he answered drily. "or adequate concentrations of matter."

"But suppose you did," Pyne granted in his large easy voice. "What then, Ness? What are you driving at?"

"Well, it would be a different life from ours," Ness replied haltingly, wondering himself what he was driving at and why. "Born more than halfway between Earth and space, you might say. In a tenuous space marsh. Not planet-bound. A primal life. The Old Life, if we're the New. A different life with different powers."

"The old Is-There-Life-in-the-Vacuum-of-Space buzz?" Pyne chuckled loudly but unmockingly. "They haven't found any in the crevices of the moon, even now when we're

digging 'em deep. Any, that is, we mightn't have brought ourselves."

"Ostwald thought that life came to Earth from outside, didn't he?" Ness asked. "Some of the old boys made smart guesses."

"He was thinking of bacterial spores driven by light pressure," Allison explained. "Nobody believes that any more." He paused. "Of course there is viral life in the stratosphere of Venus."

"I was thinking of something bigger," Ness said.

"A space squid with a tungsten gut and a sweet tooth for monatomic hydrogen? A living spaceship from a phylum Linnaeus knew only in nightmares?" Pyne laughed. "You were a kid in the Yukon, Ness. Some winter mornings you wouldn't see smoke coming from the cabin on the next ridge but one, and you'd wonder if your neighbors and their little girl had been eaten by wolves. Now the *Outward Bound* misses her wireless contact with Moon Central and we're routined to check up and you get the same feeling. You're a sensitive guy, Ness. And come to think of it, I'm thinking of something in your records."

"Irregular ESP," Ness said distastefully. "The psychers saw some coincidences where I didn't. It's a great gag." His lips shut firmly.

"Oh, sure," Pyne agreed carelessly. He looked at Ness a moment longer, then frowned at the stars.

The ship was utterly quiet again, its temperature change complete. A few motes of dust danced in the sunlit nose around the three

unoccupied seats. The two small goldfish revolved in their bubbly greenish globe bracketed to the ship's back where the men tried to relax, floating uneasily. The atmosphere of a long-deserted church had returned. The stars in their twos and fours in Taurus dead ahead still looked like spiders' eyes.

Ness thought, *Pyne's right, of course. He knows my background. The imagination of the lonely. Idiot psychers, to make me doubt even my thoughts are mine. Idiot pseudo-sensitivity. I shouldn't find anything eerie in this jump from a dead world to an unborn ship circling it. The Outward Bound, our first starship, is being built in orbit around the moon simply because, now that the lunar mines and smelters and rolling mills are working, it's a lot cheaper to lift material from Luna than from Earth. Not to create shiver effects. This is the fifth time Outward Bound missed her wireless contact. Three times it turned out to be nothing but a tongue of the solar storm licking out between the starship and Luna. And once, their oversight—big laugh. Every time we checked, the construction team was as snug in their living globe as bugs in a blanket. We've been afraid of a secret strike by the Russians or the Congo, but that's moonshine.*

The false nebulas and dust motes vanished. The *Flea* had fallen out of the sunlight into Earth's shadow. She began to clear her throat in reverse. Once again the simple stimulus pulled aside a curtain in Ness's mind.

"I like your vacuum octopuses,

Pyne," he mused. "I even think living beings born in young stardust could travel across interstellar space. Existing in weak gravity or none at all, they'd live longer, like sea creatures. They'd have tissues to resist airlessness and cold. Deep-sea creatures are built to oppose positive pressure; they'd be built to oppose negative. Their mouths and other orifices would be double, like airlocks. And once launched on their courses in the light-webbed interstellar dark, they'd hibernate or go into complete deep-freeze. A thousand years, a million, what would it matter? Time would stop for them until they were warmed by their target star."

Allison stared at him. "You're seriously suggesting an animal with the velocity of a rocket?"

Ness thought, *Somebody is.* He said, "They'd be a sort of squid. Pyne's idea. Maybe like a ramjet they'd gather and eject the dust they drove through. Maybe communities of them would help one member gather speed, like step rockets."

"Like bloody acrobats," Pyne muttered. "Squid pyramids."

"Living speeding cones breaking away at the bottom," Ness agreed. "But they wouldn't need tremendous velocities. They'd have time. They'd go in Hohman-type minimum-energy orbits from star to star. They'd take off in the general direction their own stellar system was moving and slowly catch up with another star moving in the same general direction. For instance, any being—or any slow starship or traveling planet, for that

matter — would always be coming toward our sun from Lepus, or thereabouts."

"That piddling constellation under Orion's feet? Why from there?" Pyne demanded.

"Because that's at the opposite end of the starfields from Hercules, the constellation toward which Sol moves at about 12 miles a second. Anything slow catching up with Sol would come from Lepus. If it were going 30 miles a second—stars average about 20—and if it caught up with Earth when Earth was starting to swing ahead of the sun, then Earth's 18 miles a second and Sol's 12 would add up to the newcomer's 30. It could go into orbit around Earth or Moon with no braking at all."

"But traveling at 30 miles a second, interstellar trips would take what they call forever," Pyne objected.

Ness shook his head. "Only 25,000 years to Alpha Centaurus and a million and a third to the Pleiades. Time spans like that are trifles to the creatures I have in mind."

"Double or triple those estimates for overtaking time," Pyne insisted.

Allison snorted, "Some creatures! Well, since anything goes in this bull session, I suppose they'd know what course to take between the stars by magic."

"No magic," Ness answered softly. "Creatures with such life spans, adding memory to memory, would see the stars moving, like that goldfish watching the slow swing of crumbs in his globe. Their eye would be like a great wide-angle astronomi-

cal telescope. They'd center it on their target star, allowing for its drift, and sleep their way to it, frozen like death."

"With no course corrections for a million years?" Pyne's voice was simply curious.

Ness frowned, his eyes narrowing sleepily. "Maybe a little of their eye would stay alive, warmed by the focused sunlight. The retina and a few tracks in the nervous system. Three of their squid-like jets —"

"What would motivate such creatures?" Allison asked.

"Curiosity, adventure, desire for warmth if their proto-star flickered out," Ness replied, then added softly, "hunger."

The pilot's board buzzed.

"*Outward Bound's* only a half hour away," Pyne said. "We'll suit up now and you two will arm the ship. Space-to-space rockets, jet grenades directed outward and set to fire from the board — the works."

Allison said, "You don't believe —" and stopped.

"I believe in danger," Pyne said, "and maybe just a little in Ness's psychers."

"I don't," Ness protested.

"Then you shouldn't have told us your dreams," Pyne said. His mouth laughed, but his eyes didn't, as, reaching for his suit, he glanced out at the arachnid-eyed stars.

One short deceleration burst, a longer one, a tiny correction nudge, and the *Flea* hung beside the *Outward Bound*. The three men sat side by side now, strapped in the nose. Pyne in the pilot's seat, Allison

to his left with the firing board for the new-mounted artillery, Ness to Pyne's right with the hot mike to Moon Central.

In decelerating, the *Flea* had come around so that they faced the moon again. It hung in the right end of the screen, its cratered bulk near full phase. In the other end was the dark globe of the construction team's quarters, rotating very slowly, its portholes ominously black. Between these spheres, one inky, one more than half alight, there stretched against the starfields the vast long empty skeleton of the starship, three-quarters sheathed.

But no space-suited figures crawled on it anywhere, nor any of the eight-armed manipulation vehicles called spiders. Several skin sections drifted loose, reflecting moonlight.

The effect was dismal, as of a building project abandoned for millennia, not one that had been busy with workers and that had talked to Moon Central only a quarter day ago.

Then into the right end of the spacescreen there came gently bobbing, pressed to the transparency of the screen, a human skull. All three men saw it at once and for the moment could only stare at the ivory-hued jawless irregular sphere with its great black orbits and triangular nasal opening.

The sharpest horror of the thing lay in its movements. Either the *Flea* had stopped so very close to it that it had been attracted at once by the moonship's miniscule gravity, or else it had been traveling very slowly toward the moonship. But in

either case it must also have been rotating slowly, to account for the way it now rocked back and forth against the spacescreen, the cheekbones stopping and reversing each roll, as if it were slowly shaking its head or else peering into the cabin first with one eye, then the other, through each of which, from time to time, a star glittered. This made them notice the great holes blasted or eaten from the skull's top and back. A few inches behind it drifted a human femur.

Ness thought, *it's nuzzling the screen. No, it's librating like the moon. Why should a skull look so much more essentially human and feelingful than a face? Our common denominator? Rock mated to life. Intelligence shaped in stone. The earliest of all sculptures. Craggy mountains . . . and the moon.*

Allison thought, *this is quite impossible — unless the construction team's doctor kept a skeleton. Dead flesh doesn't vanish in space, whether the man dies by accident, sickness, or a blaster. The place for bones is Earth, where there are beasts and birds to rip the flesh away, and maggots and beetles to tidy up, and microbes and water to leach out the last taint of color. Space is where everything lasts, safe from oxygen, acids, everything but the tiny hammers of radiation and the lone wandering ions and dust grains. Yet this skull isn't even faintly pink. It's been sucked dry.*

Pyne thought, *it's a danger sign* and forgot it. He scanned swiftly, searchingly.

There could be any number of

hiders inside the partially sheathed starship. but he saw none. He saw bones, then another skull, tiny as a tooth in the distance. It was beginning to look as if there weren't a survivor.

Then something changed in the edge of his vision and he swung to the left.

The dark construction sphere, in rotating, had become deformed. The side swinging into view was crushed inward as if by some unimaginably great judo chop. An opening yards long, feet high, had been torn in the globe's equator. Only darkness inside —

No. Now moonlight began to show something long and straight and pale and divided into sections like a white tape-measure stretched out straight, only longer and much wider. The pale band widened and narrowed rhythmically.

And now, just above the band's center, behind it in the darkness of the smashed globe, a pale dark-centered circle big as a man's chest appeared. It brightened in the moonlight, brightened, and then when that eye — for Pyne was sure suddenly it was a single great eye — when that eye became its brightest, gazing directly at *Flea*, it began to move toward him, slowly at first, then very swiftly, and the white band came with it. As the whole launched out of the construction globe, he saw that it was a round flat object about eight yards in diameter and a yard in thickness, with single eye and great white toothwall in front and with a dozen jets behind.

Pyne would never have noted its circularity except that his fingers had automatically fired *Flea's* jets to take the little ship upward out of the path of the crushing stroke. Now the creature's dull gray flesh was passing under the *Flea* — straight into its fiery jets — when two gray striated tentacles whipped upward from beside the great eye, like steel cables snapped under tension. They struck the *Flea* ringingly, grooving its double skin where they clutched, whitening the spacescreen where one gripped.

A strong vibration went through the ship, the suits, the men. Then the *Flea* was flipped over, so that all three of them were staring straight down at the creature.

At that instant Allison called: "Mask!" and fired all the forward rockets. Their explosion a scant ten yards away battered the *Flea* — explosion front almost as harsh as shock wave — and almost blinded the three men despite the polarization of their face plates. Yet the explosions didn't snap or shake loose the tentacles, and when the men saw again, there was the creature with four holes gaping in it, each a yard across, and all still bathed by the fiery tongues of the *Flea's* jets.

Then the creature drew itself up through the yellow flames and enfolded the *Flea*.

Allison fired the dozen jet grenades unlaunched; recoiling pressures raised inward blisters which broke to let in brief fires. Then the *Flea* was swinging and spinning, its sides buckling. Allison fired what was left, Pyne turned the jets to full power —

and suddenly the convulsions were over.

What still clung against the spacescreen was the forward rags of the creature, its tatters of skin thick as armor plate, its inner vessels like heavy piping, and among them still a few bones. There were the stumps of the gripping tentacles and the great white mouth below them — a mouth which they saw now was double, with one toothplate in front and one behind. The forward set were still shutting and opening feebly, grating against the spacescreen. It made Ness think of the rocking of the skull.

And there was the eye. Its cornea and lens had been blasted away, barring the black retina. On this were

permanent white markings in a pattern all of them slowly recognized: the constellation Hercules and around it Draco and Corona Borealis and a part of Ophiuchus and Lyra with great Vega. In the center was a white round bigger than all the rest — a star that didn't fit, unless it were Sol as seen from the orbit of Saturn. That, Pyne decided, was where the creature had awakened. The white markings would be a sort of scar tissue — the markings of light focused there for eons. Most of the light-scars were not dots but line, recording the movements of the stars over about the last quarter million years.

He said grudgingly, "That's your alien, all right, Ness."

Ness nodded. "One of them," he said softly. END

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Of Godlike Power

by MACK REYNOLDS

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The world was wrecked, that at least was obvious. The question was, was it worth putting back together again?

XIV

Helen Fontaine and Buzz De Kemp bailed him out toward noon of the next day.

Buzz came back to the cell first, one of the new Polaroid-Leicas in his hands and wearing a grin behind his stogie. There was an adhesive

plaster patch above his right eye which only managed to make the sloppy newsman look rakish.

"Buzzo!" Ed Wonder blurted. "Get me out of here!"

"Just a minute," Buzz told him. He adjusted the lens aperture, brought the camera to his eyes, flicked the shutter three or four times.

What Has Gone Before —

The wondrous thing about Ed Wonder was that he was only a radio performer with a talk show, it never occurred to him that he could destroy the world.

But when he met Ezekiel Joshua Tubber at the man's tent-show revival meeting he began a chain of events which put himself out of a job, and thrust the Earth teetering to the verge of annihilation. For what Tubber declared to be so WAS so. He had The Power. When he spoke with the power of tongues, whatever he stated came to pass; he preached against vanity, and the whole cosmetic industry was ruined; cursed broadcasting, and knocked out every radio and television set in the world.

The psionic enchantments of old man Tubber were nothing, however, compared to the spell that his daughter, Nefertiti, cast over Ed Wonder. It was because of her that he gave Tubber his first publicity break, because of her that he defended the old man against his detractors and because of her, finally, that he found himself fighting off a maddened mob bent on vengeance. For now old man Tubber had destroyed the last mass-medium pleasure of the people by putting a hex on motion pictures. There was nothing left for people to do but read, or talk, or think . . .

No wonder they were out for blood!

He said happily, "With luck I'll get you on the front page. How does this sound? Local radio man leads lynch mob."

"Oh, bounce it, Buzz," Helen Fontaine said, coming up from behind him. She looked in at Ed Wonder and shook her head critically. "Whatever happened to the haberdasher's best friend?" she said. "I never expected to see the day when Little Ed Wonder's tie wasn't straight."

"Okay, okay, funnies I get," Ed rasped. "Follow me, says Buzz De Kemp and we'll rescue the movie projectionist like the cavalry coming over the hill at the last minute. So great. He sort of disappears and I wind up getting drenched by the fire department and then arrested by the police."

Buzz looked at him strangely. "I heard you yelling, Little Ed. About all movie projectors being on the blink. How did you know? It couldn't have been more than fifteen minutes earlier that it happened. The news wasn't even on the teletype yet."

"Get me out of here," Ed snarled. "How do you think I knew? Don't be a kook."

A uniformed jail attendant came up and unlocked the cell door. "Come on," he said. "You been sprung."

The three of them followed him out.

Buzz said, "So you were there when he laid on the new curse. eh?"

"New curse?" Helen said.

Buzz said to her, "What else?

Ezekiel Joshua Tubber. First he gives all women an allergy if they wear cosmetics or do themselves up in glad rags. Then he slaps his hex on radio and TV. Now all of a sudden there is a strange persistence of film being projected on a screen; it takes an eighth of a second or so for the picture to fade, so the next picture can be different. It doesn't interfere with still-life shots, but action is impossible."

They had reached the sergeant's desk and Ed collected his belongings. His situation was explained. Theoretically, he was out on bail. In actuality, Buzz was going to go to bat for him through the paper and get the charge squashed. If, by any chance, that didn't work, Helen said she'd put pressure on her father to pull some wires. Ed was of the private belief that the only circumstance under which Jensen Fontaine would pull wires for Ed Wonder was if they were wrapped around his neck. However,

On the street, Buzz said, "Let's go get a drink somewhere."

"Somewhere is good," Ed said. "You can't get in a bar for love or money. Standing room only and they limit the time you can stay, so that others will have their chance."

Buzz said, "The mayor announced today that he was issuing emergency liquor licenses to last for the duration. New places ought to be opening up in a matter of hours."

Helen said, "We can go to the club for a drink. I'll take you in as guests."

Her General Ford Cyclone was at

the curb. They got into it and Helen dialed their destination. The car rose and slipped into the traffic.

Buzz De Kemp stared out at the horde of wandering pedestrians. "Yesterday was bad enough," he said. "But today there's no school. The kids don't know what to do with themselves."

"Neither do their parents," Helen said. "Doesn't anybody work in this city? I'd think . . ."

"Do you?" Ed said, for some reason irritated.

"Well, that's another thing, sharp," she said huffily. "I have my charity work with the junior league and . . ."

Buzz said, "I looked it up. Two thirds of the population of working age in Kingsburg are on the unemployment lists. Of those remaining, most put in a twenty-five hour week, some of those with more progressive—I like that term—unions, put in twenty hours." He tossed his stogie, half smoked, onto the street. "It makes for a lot of leisure time."

The country club was a couple of miles outside the city limits. If Helen Fontaine had expected it to be comparatively empty, she was mistaken. She was far from the only one to bring guests to the club's bar. With every drink dispensary in the city filled to overflowing, even the town's more affluent citizens were hard put to imbibe and the two or three private clubs Kingsburg boasted were nearly as full as the commercial auto-bars.

However, they managed to slip into chairs about a table which was just being vacated as they arrived.

Helen brought her credit card from her purse and laid it on the table's surface. "Gents, the drinks are on me. What'll it be?"

They named their druthers, she dialed them, and when the drinks arrived and the first sip had been taken, said, "Okay, let's bring the meeting to order. I'm not up on this movie thing."

Ed Wonder gave them a complete rundown on the happenings in Saugerties. By the time he wound it up, they were both staring at him.

"Oh, Mother," Helen said. "You mean, until you told him, he didn't even know he'd done it. Radio and TV, I mean."

Buzz said, "Remember on the program? He had forgotten he put the hex on women's vanity." He looked at Helen Fontaine calculatingly. "You know, on you the Homespun Look comes off."

"Thank you, kind sir. If I could think of something about your own appearance that I could say something nice about, I would. Why don't you get a haircut?"

"Compliment the girl, and what do I get?" Buzz complained. "A jolly. I can't afford a haircut. I'm the most improvident man in the world. I've been known to go into a cold shower and come out three dollars poorer."

Ed said gloomily, "I admit I let the cat out of the bag. Now he knows." They scowled at him and he explained. "Tubber. Now he knows he's got the power, as Nefer-titi calls it. What's worse, it seems to be growing."

"What seems to be growing?" Buzz growled at him.

"The power to make with hexes. Evidently, he's always had it, but only just recently has he been using it on the grand scale."

"You mean . . ." Helen said, ramifications dawning.

"I mean his first two major hexes he pulled off in a rage and without knowing what he was doing. This last one he did on purpose. Now he knows he can do them on purpose."

As though rehearsed they all picked up their glasses and finished off their drinks. Without asking them, Helen dialed three more.

Ed said, "Have you two considered the fact that we're the only ones in the world, except for Tubber's little group, who know what's going on?"

Buzz pulled out a fresh stogie and rammed it into his mouth. "How could I forget it? A newspaperman sitting on the biggest story since the Resurrection and he can't even write it. If I mention Tubber and his cures to Old Ulcers once more, he's promised to fire me for drinking on the job."

"At least you've still got a job," Ed told him sourly. "Look at me. I spend a couple of years working up the Far Out Hour, a program devoted to spiritualism, ESP, flying saucers, reincarnation, levitation, and what not, and for all that time I have an endless series of cranks, crackpots and crooks as guests. So finally a real phenomenon comes along. And what happens? I'm out of a career."

"Both of you are breaking my heart," Helen said snappishly. "Don't forget, I was runner-up on the state-wide ten best dressed women of the year poll."

Buzz looked at her. "How about your father? He was there when Tubber hexed radio. Doesn't he realize what's going on?"

Helen said, "I think about half and half. What he really thinks is that Tubber is an agent for the Soviet Complex who's been sent over to sabotage American industry. He wants the Stephen Decatur Society to investigate and place their information before the F.B.I. Matthew Mulligan agrees with him, of course."

Ed Wonder closed his eyes to hide his suffering. "Oh, great. I can just see that bunch of kooks sniffing around Tubber's tent. The new hexes would start flying like geese."

Helen said, without a good deal of conviction, "The Society isn't composed of kooks, as you call them."

Buzz leered at her through the smoke of his newly lighted stogie. "What is it composed of?"

She laughed suddenly. "Twitches," she said.

Buzz looked at her afresh. "I think I could learn to like you," he said, nodding.

"All right, all right," Ed said. "We've got to do something. You both realize that, don't you?"

"Yes," Buzz said. "What?"

Helen said, worriedly, "Perhaps if we all went to see Tubber . . ."

Ed held up a hand. "Go no fur-

ther, please. Here sit the three of us. Helen brought him to wrath and the result was the Homespun Look and what will eventually mean the collapse of the cosmetic and women's textile industries. Buzzo brought him to wrath and the result was the end of radio and TV. Through a fluke, I said too much and as a result he brought himself to wrath and wound up the movie industry. With a background like that do you think any of we three ought ever to let him lay eyes on us again? We seem to be a set of accident prone, with the whole human race getting the benefits."

Buzz growled around his stogie, "I think you're right, chum."

"But we've got to do something," Helen protested.

"What?" Buzz said.

"The only thing I can think of to do, is order another round of drinks," Ed said unhappily.

They had left it at that. All three resolved that something had to be done. And the best idea any had come up with was to have another drink.

Ed finally left them to that solution of the problem and took a cab to where he had left the Volkshover the night before. It seemed to have survived the mob and the wetting down from the fire hoses which had finally broken up the enraged crowd and led to the rescue of the hapless movie projectionist.

On the scene again, Ed could only wonder at the hysteria of the citizenry that they could have gotten that worked up over a simple matter such as not being able to see the movie

for which they had stood in line. What the devil, this was the tail end of the 20th Century, not frontier days. You didn't lynch a man because you suspected him of lousing up your evening's entertainment.

Or did you?

What had the rioter said to him? *Everybody's on edge.*

It didn't make too much sense to Ed Wonder. Admittedly, he was thoroughly familiar with the world of radio and TV and knew the dependence of most citizens on the entertainment they provided. But Ed Wonder had been a performer, rather than a passive viewer and, at least subconsciously, was contemptuous of his audiences. He viewed TV, himself, only as part of his work, in common with his colleagues.

Back at his own apartment house, he remembered to go to the drugstore for a newspaper, before ascending to his rooms. The manager had saved a paper for him, otherwise, as the day before, the morning edition of the *Times-Tribune* was sold out.

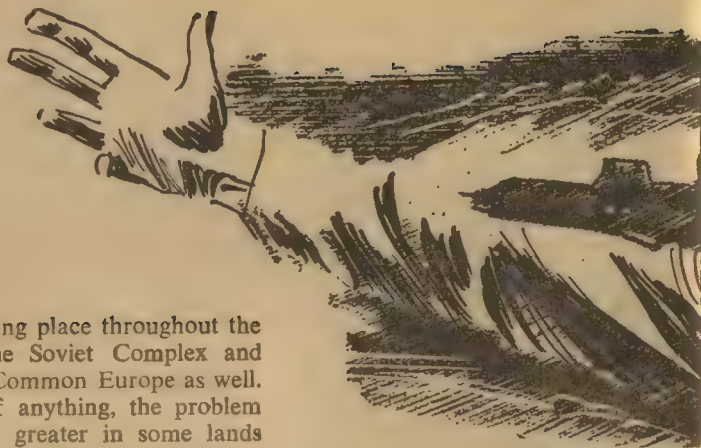
He showered, utilized his *No-Shav* cream, and dressed in fresh clothes. Then, before sitting down to read, he dialed himself a glass of ale, the edge of the drinks he'd had with Helen and Buzz having begun to wear off. The auto-bar failed to respond and he scowled down at it. The gadget was designed for a variety of forty different drinks, and operated through a distribution center which served this part of the city in much the same manner as

his kitchenette worked. He tried dialing a Fish House Punch with the same results.

Irritated, he went to the phone and dialed the center. A harassed ash blonde appeared on the screen and before he could open his mouth, said hurriedly, "Yes, we know. Your auto-bar is failing to function. Unfortunately, stocks have run short due to unprecedented demand. New supplies are being rushed up from Ultra-New York. Thank you." She flicked off.

Ed Wonder grunted and sat down in his reading chair. Unprecedented demand, yet. Well, it wasn't surprising. With nothing else to do, people had upped their drinking considerably. Come to think of it, he had himself.

The paper had no inkling of the real nature of the blight on the world's entertainment media. None whatsoever. Evidently, Buzz De Kemp was the only journalist exant who realized the actuality, and his city editor had ominously warned him not to mention Ezekiel Joshua Tubber and his curses ever again. AP-Reuters and the other news services hadn't a clue. Learned articles and columns pursued this theory and that, ranging from sun spots, or radio emanations from far star systems, to sinister schemes on the part of the Soviet Complex or Common Europe to disrupt America's balance by withholding needed restful entertainment from the man in the street. Just how this was being accomplished was moot. Those who argued against the charge, pointed out that the same disrup-



tion was taking place throughout the realm of the Soviet Complex and throughout Common Europe as well.

In fact, if anything, the problem was already greater in some lands than it was in the United Welfare States of America. England, for instance. There were riots in London, Manchester and Birmingham. Evidently, senseless, meaningless riots. Not directed toward anyone or anything in particular. Simply the rioting of crowds of people with nothing to do.

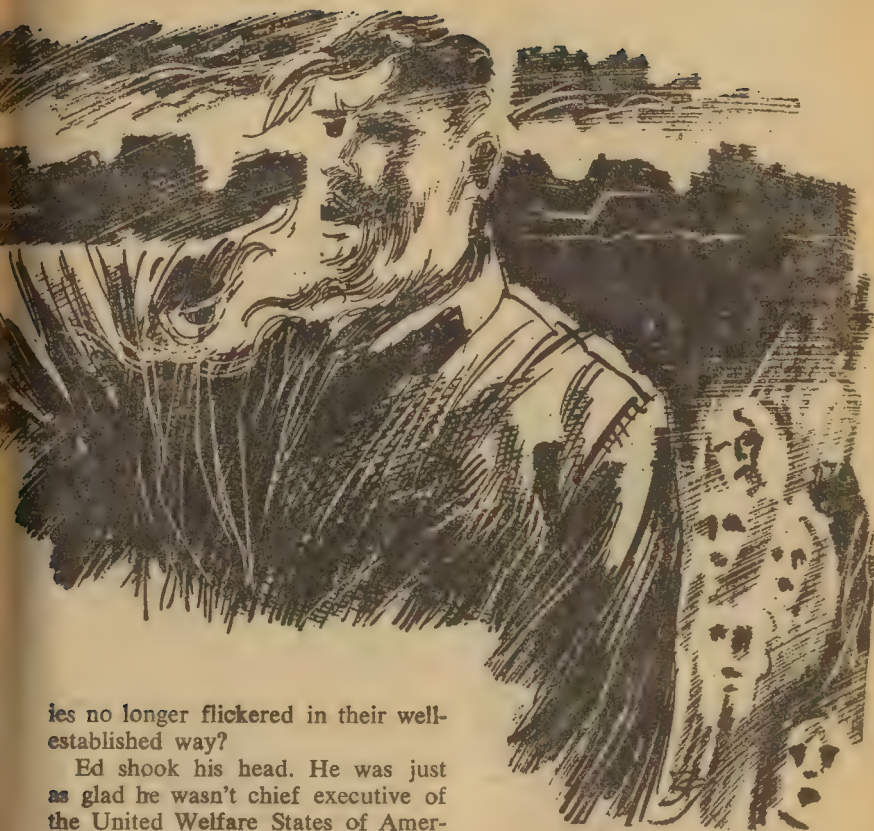
Ed Wonder felt a cold apprehension edge up his spine. He had seen that mob the night before. In fact, he had been manhandled by it.

He had skimmed quickly through the paper looking for the story of the lynch mob who had all but finished off the unhappy movie projectionist who had been blamed for the failure of the film. He had trouble, to his amazement, finding the item. Ed would have thought it called for front page coverage, in a town no larger than Kingsburg. It was probably the only attempted lynching in the city's history. But no, it was buried in the inside and the story passed over more as a joke than a serious affair in which

hundreds had been sprayed with high-pressure fire hoses and police brought in by the dozen to quell the fury.

Ed got it. The story was deliberately being played down. The city fathers, or whoever, didn't want to bring to the attention of the populace how easy—and perhaps how entertaining—it was to riot. Face reality, during the height of the trouble last night, that mob was having the time of its collective life, men, women and teenagers.

He went back to the front page. The President had made with some sort of gobblydygook explanation of the disruption of TV and radio. He hadn't got to the movies yet. When he did, that was going to be a dilly. Sun spots to foul up TV reception? Sure. Possible. Or strong radio emanations from space? Well, yes. Possible. But movies? How were they going to explain the fact that mov-



ies no longer flickered in their well-established way?

Ed shook his head. He was just as glad he wasn't chief executive of the United Welfare States of America. That job, President Everett MacFerson could have.

There was another item from Greater Washington. A plea on the part of the White House for all retired actors, circus performers, vaudeville veterans, musicians, singers, carnival attractions and all others however remotely attached to show business, and however long ago, to report to the auditoriums of the nearest high schools. There was a barb on the end of the plea. Fail-

ure to comply would automatically cancel any unemployment insurance benefits being enjoyed by those involved.

Ed Wonder rubbed the end of his nose with a thoughtful forefinger. That would include him. He would have to report. The conclusions were obvious. The radio-TV curse had only come about a few days ago, but already Greater Washington was de-

ciphering the handwriting on the wall. Ed wondered uneasily just how bad those riots in England had been.

He went into his kitchenette and dialed himself a lunch. It tasted nothing, in spite of the fact that he hadn't had a decent meal since the day before. He threw it, half eaten, into the disposal chute.

What he wanted was another drink. He was turning into a funnel like Buzzo, and like Helen, for that matter. Strange about Helen. Somehow, these past few days had altered his feelings about her. He liked her fine enough, but there was no urgency about it. One week ago and she had been the most important single matter on his mind.

XV

He took the elevator down to the street and looked in the direction of the nearest bar. There was the now customary long line before it. He didn't bother to check the other bars in the immediate vicinity. What was the use? Instead, he headed up the street toward the liquor store.

This was a new development. There was a crowd outside the door, and a fat tub of a man standing in the doorway itself explaining something or other. When Ed Wonder got nearer, he got the message.

"Sorry folks, not a thing left. Sold out. Waiting for new deliveries."

"Well, how about gin or rum?" somebody called to him.

"No, I mean everything. Whiskey, gin, rum, brandy. Everything. All sold out."

"Nothing at all?" somebody else said incredulously.

The proprietor was apologetic. "All I got is a few bottles of Creme de Mente."

"What's that?" the inquirer grumbled. "Is there alcohol in it?"

"It's a cordial," Ed told him. "Sweet and tastes like peppermint. Not quite as strong as whiskey."

"How would it mix with coke?" somebody else said.

Ed closed his eyes and shuddered.

"Well, I'll take a bottle, damn it. I gotta have something around the house. It's driving me batty." The speaker had no need to mention what it was that was driving him batty.

"Let me have one too."

The group pushed in. The fat proprietor said hastily, "Only one bottle to a customer, folks. I only got a few bottles left. And you got to realize this is special stuff. Fifteen bucks a bottle."

Ed Wonder walked back in the direction of his apartment. On the corner was gathered a crowd. He came closer and stood on tip-toes to make out their interest. There was a trio of kids in the center, doing tricks, minor tumbling tricks. The crowd watched them glumly, although every once in a while somebody would call out encouragement. From time to time the youngsters would be tossed a coin or two. The repertoire was strictly limited.

It reminded Ed that he was going to have to go to the nearest high school and report as an unemployed member of show business.

He did that the next day. It didn't

take him long. There weren't as many actors, musicians and show folk in general as there once had been. And evidently no vaudeville, circus or carnival veterans at all in Kingsburg. Automation had come to the world of entertainment as well as to every other field. Given TV, a comparative handful can entertain two hundred million persons at once, where in the old days of vaudeville a couple of thousands at a time was maximum. Given movies, a dozen actors can perform a play for the million mass, while in the day of the legitimate theatre a few hundred at most could follow the show. Given radio, a pop singer's voice could become known on a world-wide basis, whilst a nightclub singer of old could bring alcoholic sobs to the occupants of a few score tables at best. And musicians? But here automation had reached its ultimate with the canned music of record and tape.

No, there weren't as many show business folk as there had been even a decade ago, not to speak of a quarter century or more.

And Ed proved a disappointment when his turn for interview came up. They took down in detail all that he had ever done, and evidently decided it was precious little that would benefit them.

Did he think that he could act as an M.C. for vaudeville shows?

Ed Wonder sighed. Yes, he thought he could.

They'd keep in touch with him.

He left and climbed back into his hovercar.

He had to do something. Over and over it came back to him that he. Buzzo and Helen were the only three outside the Tubber circle who actually knew what was going on.

A boy with a heavy stack of papers under his arm was yelling an extra. It came to Ed that it had been a very long time since he had heard a newsboy shouting extra. Radio and TV news commentators had put an end to that newspaper institution of old.

He made out what the boy was shouting. Race riots, somewhere or other. He didn't have to read the paper to get the picture. Bored people wandering up and down the streets with nothing to do.

Race riots. He wondered how long it would be before people got around to religious riots. Riots between races, riots between different religious creeds, riots over politics. It gave you something to take up time, didn't it?

He simply had to do something. There must be some starting point. He changed his direction. He drove out along the road to the south and eventually pulled onto the university grounds.

He was in luck and had no difficulty in finding Professor Varley Dee in his office at the Department of Anthropology. Ed Wonder had had the crisp anthropologist on the Far Out Hour several times as a panelist, but had never met him before on his home grounds.

He chuckled at Ed Wonder even as he offered him a chair. "Well, sir, even the ambitious Little Ed Wonder finds himself amidst the un-

employed with the disruption of the radio waves, eh? Fascinating development. Have the technicians arrived at any conclusions? What's this about sun spots?"

"I wouldn't know," Ed told him.

"Every time something comes along to foul up reception, or the weather, or whatever, it's blamed on sun spots. And that's all I know about the subject." Actually, he didn't want to get into the subject of TV reception with the fiesty professor. If he had, they would never get around to the real reason for his visit.

He changed subject, abruptly, "Look, Professor, what can you tell me about Jesus?"

Dee gimlet-eyed him. "Just who do you mean when you say Jesus?"

Ed was exasperated. "For crissake. *Jesus*. Jesus of Nazareth. Born on Christmas. Died on the cross. The founder of Christianity. Who else could I mean?"

"There are Jesuses and Jesuses, Little Ed. According to what religious sect you follow, or if you follow none at all and are interested in the historic Jesus. Do you want myth, or history?"

"I'm talking about reality. The real Jesus. What I . . ."

"All right. Then to begin with, **A** his name wasn't Jesus. His name was Joshua. Jesus is a Greek name, and he was a Jew. And he wasn't from Nazareth. There was no such town as Nazareth in Palestine at that time; later on the boys worked that one in to fill in some holes in the prophecies that suppos-

edly foretold the coming of the Messiah. And he wasn't born on Christmas. The early Christians took over that day from the pagans in one of the attempts to popularize the new religion. Christmas was originally the winter solstice, it got shoved around to December 25th through faulty calendars. It's even debatable whether Joshua died on the cross. If he did, then he died in a remarkably short time. The horror of cruxifixion as a means of execution is in the time it takes the victim to die. Robert Graves made a good case for the hypothesis that Jesus survived the cross, after a cataleptic fit, and was spirited away."

Ed was bug-eyeing him.

Varley Dee said, his voice cranky, "You wanted to know about the historic Jesus. Very well. That's just the beginning. For instance, many of the more serious scholars doubt very much that Joshua had any intentions of starting a new religion. He was a good Jew and practiced that religion faithfully his whole life."

"Listen," Ed demanded. "Is there anything left at all of what I learned in Sunday school as a kid?"

The professor chuckled acidly. "Actually, quite a bit. Just what was it you wanted to know?"

Ed said, "Look, for instance the story about feeding the multitudes with two or three fish and a few loaves of bread, and then winding up with several bushels of scraps left over."

Dee shrugged. "Probably a parable. Many of Joshua's teachings were given in parables."

"Well, some of the other miracles. Raising the dead. Curing the lepers. That sort of thing."

Dee was impatient. "Modern medicine performs miracles of that order with ease. In Joshua's day their medical procedure before pronouncing a person dead was primitive, to say the least. As a matter of fact, you don't have to go back that far. Did you know that the mother of Robert E. Lee was pronounced dead and was actually buried? She revived later and was rescued. So far as leprosy is concerned, it was and is a meaningless term, medically speaking, and in those days covered everything from skin diseases to venereal infections. Miracle healers were a dime a dozen, and a religious figure didn't get very far unless he could put on a good performance in that department. Actually, Joshua is on record as being contemptuous of his followers continually wanting him to prove himself by such devices."

Ed Wonder squirmed in his chair. "Well, if not Jesus, how about some of the other miracle workers? Mohammed, for instance?"

Dee eyed him critically. "I would think that with your program, Little Ed, you would have had your fill of miracle workers, by this time. Certainly, down through history, we run into them. Jesus, Mohammed, Hassan Ben Sabbah . . ."

"That one misses me," Ed said.

"Founder of the Ismailian Shiite sect of the Moslems. His followers, the assassins, were fanatical beyond belief. At any rate, supposedly he performed various miracles, includ-

ing teleporting himself several hundred miles at a crack."

"But . . ." Ed said. Professor Dee's attitude suggested a very big but.

"But," Dee said, "close inspection by reliable scholars into the lives of these miracle workers seldom turns up evidence of unexplainable happenings."

It was directly the opposite of what Jim Westbrook's opinion had been the other day. Ed stirred in his chair. His interview with Professor Varley Dee was netting him a zero.

He came to his feet. "Well, thanks, Professor. I won't take up any more of your time."

Dee beamed at him. "Not at all, Little Ed. Pleasure. And I look forward to appearing on your remarkable program, once again, when the present difficulties with the air waves are over."

"They're not going to be over," Ed said gloomily, as he prepared to depart.

That set the other back. "Not going to be over? Well . . . why?"

"Because one of the miracle workers we've been talking about slapped a hex on them," Ed said. "See you again, some time, Professor."

It was several days later before he decided to get in touch with Helen and Buzz again. Several days spent in a lethargic stew. Several days of indecision and frustration.

There should be something that he, Buzzo and Helen could do. But where was there to start? Neither of them dared get within viewing distance of the gifted prophet. On the

other hand, Ed Wonder was apprehensive over what Tubber might get around to doing all on his own. He didn't need the catalyst of Ed or the others around. He was perfectly capable of dreaming up his own hexes. And was probably busy doing so.

He decided to call Helen Fontaine and suggest a date. Maybe being together would bring something to mind. At worst she'd be a source of a few drinks, it was becoming even more increasingly difficult to find room in a bar, or to find his own autobar working.

He didn't have to phone Helen. She beat him to it.

The audio-alarm told him he was wanted on the phone, and it was her face that lit up the screen when he flicked it on. She looked distraught.

"Little Ed! Do you know where Buzz is?"

He scowled at her. "No. The last time I saw him he was with you at the club."

"He's disappeared."

"What does that supposed to mean?"

"I've been trying to find him, to suggest we three get together again and bounce this thing around. But he's not at the paper. Nor at his apartment."

Ed grunted. "He's gone on a bender. I don't blame him."

"I've checked every bar and club in town. He's not at them. He's not anywhere."

Ed had a sudden premonition. "You don't think he's gone up to see Tubber?"

Her eyes were wide. "That's what I'm afraid of too."

Ed said, "I'll be right over." He flicked off the phone and turned to go.

XVI

The audio said, "Two gentlemen to see you."

Ed looked at the door screen. Two men stood there. Two men he had never seen before.

He opened up and they looked at him impassively.

"You're Edward Wonder?" the first man, the older one, said.

"That's right."

"There's somebody'd like to talk to you." He brought out a wallet, flicked it open for inspection. "My name's Stevens; this is Johnson."

Ed grunted his lack of awe. "Ges-tapo, eh? What can I do for you?" he asked.

"You can come along," Johnson said, mildly courteous.

Ed Wonder was moved to stubbornness. "Why? What've I supposed to have done?"

The first one, Stevens, said, "Search me. Some big deal, Mr. Wonder. Now will you please come along?"

"Look, I'm a citizen, and a taxpayer." He thought about that. "At least I was until a week ago. Aren't you supposed to have a warrant, or something?"

"Evidently, that was the good old days," Stevens said, without antagonism. "Things are in a hurry now. Emergency. We were told to bring you in soonest. So that's what we're doing."

Ed Wonder felt more stubborn

by the minute. "No," he said. "Besides, I hate coppers."

They looked at him.

He said, "That's a long-time ambition. To call a police officer a copper."

Johnson said, "Swell. So now you've called somebody a copper. So let's get along."

Ed gave up. "All right," he said. "But if you think you've got an emergency, you ought to know about my emergency."

"It's probably the same one," Stevens said.

They ushered him down the elevator and to the street, one at each arm, easily, but Ed Wonder had the feeling that if he'd made a sudden dash for it, he wouldn't have got more than two feet. There was a huge hover limousine before the door. They ushered him into the front seat and took their own positions to both sides of him. Stevens dialed their destination and the hover car rose to a police level and sped south.

"Where're we going?" Ed asked. "Manhattan."

"Why?" Ed said. "Don't I get some sort of idea? I thought I was allowed to phone a lawyer."

"That was the good old days," Stevens said.

Johnson was more cooperative. "Actually, Mr. Wonder, we don't know what they want you for. This is the most hush-hush operation I've ever worked on."

"Who's they?" Ed demanded, indignant again.

Neither of them responded to that.

Manhattan was approximately a hundred miles to the south. Stevens lessened the speed fifteen minutes later and slipped into the heavier traffic of Ultra-New York.

They approached the New Woolworth Building, entered a vehicle portal and came to a halt before three smartly uniformed men, two of whom carried heavy caliber automatics in quick draw holsters.

Ed and his two plainclothesmen came out of the car and received the oatmeal look from the guards.

Credentials were presented and checked. The unarmed guard got on a phone and spoke into it quietly. Then he turned, nodded and showed them to an elevator.

They rose at stomach-churning acceleration for what seemed a fantastically long time to Ed Wonder. They reached a peak of speed and then began to drop off. The door finally opened.

There were more guards, also armed. These too were passed. Ed Wonder's two plainclothesmen ushered him down a hall to a side corridor. He passed a window and shot a look out. They were evidently very near the top of the tallest building in Manhattan. The doors of some of the rooms they passed were open. Inside were scores, hundreds, of men and women office workers. All seemed harassed. Other rooms were being set up for further activity; I.B.M. machines were being wheeled in, key punches, collators, automatic printers, sorters.

"What's all this?" Ed asked.

Johnson replied reasonably, "Like we told you. We don't know."

They finally reached their destination. Ed was ushered into a small anteroom, unoccupied save for a single girl at a desk.

Stevens said, "Wonder, Edward. Kingsburg. 'C' priority. Number Z-168."

He handed her an envelope. She opened it and scanned the single sheet it contained. "Oh, yes. Mr. Yardborough has been waiting." She directed her voice to an inter-office communicator. "Mr. Yardborough. Mr. Wonder from Kingsburg has been brought in."

Ed said hotly, "Look here, am I under arrest? If so, I want to phone a lawyer."

She looked at him, shook her head as though too tired to answer. "Mr. Yardborough will see you now."

One of the plainclothesmen opened the inner door for Ed's passage. Closed it behind him.

Mr. Yardborough sat at a littered desk. The way Ed remembered it, an executive should never have a littered desk. There should only be one item of business at a time before the efficient executive.

Mr. Yardborough's desk was littered to hell and gone.

He looked up, as weary in appearance as his receptionist. "Have a chair, Mr. . . . uh . . . Wonder. Let me see." He took up a paper out of the mess before him, then three news clippings.

Ed Wonder sat down. At least, somewhere in here he'd find out what was going on. The whole thing looked less and less like a police matter.

He began to suspect . . .

Yardborough said, "Edward Wonder. Program director of the Far Out Hour, broadcasting on radio from Kingsburg. This first item we have on you is a news item written by . . ." he checked the clipping ". . . Buzz De Kemp, of the Kingsburg *Times-Tribune*. It describes, somewhat tongue in cheek, your radio guest, Ezekiel Joshua Tubber, an evangelist, who, supposedly, placed a, uh, curse on the vanity of women."

Ed started to say something, but Yardborough held up a weary hand. "Just a minute. The second item is along the same line. Mr. De Kemp did another piece, also tongue in cheek, contending that this itinerant preacher, Tubber, was the cause of the so-called Homespun Look fashion fad."

Yardborough laid down the second clipping, took up a third. "The last item also carries Mr. De Kemp's by-line but the style of writing seems somewhat different."

"It was redone by the rewrite desk," Ed mumbled. Things were beginning to clear.

"Indeed. Very well. This story, humorous in tone, reveals that Tubber claims to have been the cause of the current difficulties pertaining to television and radio." Yardborough put the clipping down.

Ed said, "Where'd you get those?"

The other man smiled ruefully. "Believe me, Mr. Wonder, we have copies of every newspaper in the world, in whatever language, coming in here to the top five floors of the New Woolworth Building. We have translators going through them."

Ed looked across at him blankly.

Yardborough said, "Going through every newspaper in the world in hopes of finding a single hint, is only one of the operations going on in this building, Mr. Wonder. Nor is this building alone in the effort. However, suffice to say that we turned up these three items on you and Tubber. Now then, what have you to say to elucidate?"

Ed blurted, "What do you mean, what do I have to say? Nothing. They're true."

Yardborough said, "What's true?"

"Ezekiel Joshua Tubber put a curse on women's vanity. And it worked. Then he put a curse on radio and TV. That happened on my program. It worked too."

Yardborough came to his feet. "All right, come along with me, Mr. Wonder."

"Don't you want to hear the whole story?" Ed Wonder said, surprised.

"You're already out of my jurisdiction," Yardborough told him. He gathered up the papers pertaining to Ed and led the way back into the receptionist's office. The two plainclothesmen were still there, patiently waiting as only police can patiently wait.

Yardborough snapped to them. "This man has become 'A' priority, it's your necks if anything happens to him." He said to Ed Wonder, "Follow me."

They went back into the corridor and up and down halls again. They were stopped only once by guards for identification. Finally, the four of them reached another office,

larger this time, three desks in the reception room. There were several guards about. Four or five nervous-looking characters sitting, obviously waiting for something or other, each with his own contingent of guards.

"Have a seat," Yardborough told Ed, then went on to speak to one of the girls at a desk. He put the papers before her and spoke lowly. She nodded.

Yardborough turned back to Ed Wonder. "Good luck," he said. To the two plainclothesmen. "Stick with him like paste until further orders."

"Yes, sir," they both said. Yardborough left.

"What the devil goes on?" Ed demanded.

Johnson seemed impressed. "You're the first 'A' priority we turned up," he said.

"Oh, great," Ed snapped. "What's 'A' priority mean?"

"Search me," the other told him.

He waited possibly half an hour before a jittery-looking type issued forth from one of the several inner offices that opened off the reception room, and called, "Edward Wonder?"

Ed stood up. His two guards came to attention.

The newcomer approached. "You're Wonder?"

"That's right."

"Come with me." Even as they walked into the inner sanctum, the other was scanning the report and Ed's three clippings. The guards stayed behind.

There were two desks inside, the

second occupied by an army major who had discarded his tunic which hung over the back of a chair, and loosened his tie. He looked as though he hadn't slept for quite a while.

The jittery-looking type said, "I'm Bill Oppenheimer. This is Major Leonard Davis. You've been turned over to us as an 'A' priority."

Even as he spoke he had tossed the report and clippings to Major Davis, who began tiredly perusing them.

Oppenheimer bent over an intercom on his desk and rapped, "I have here in my office a Mr. Edward Wonder of Kingsburg, New York. I want an immediate complete on him. Send a team." He flicked off the intercom and turned back to Ed. "Sit down," he said emptily.

Ed said, "What in the devil's 'A' priority?"

"Somebody who thinks he knows what caused TV and radio to go haywire."

"Why don't you add movies?" Ed said. He was still confused. The curves were coming too fast for him to assimilate.

The army man looked up from the papers. He snapped, "We thought them separate phenomenon!"

"Well, they aren't," Ed told him definitely.

Oppenheimer sat on the edge of his desk and sighed. "Thus far, Mr. Wonder, the major and I have interviewed some three hundred persons in this office. All of them thought they knew the reason for the disruption of the air waves. All of them had been passed on to us as

'A' priority. Now, will you please tell us your story, in detail. As much detail as possible."

The major snorted and tossed the clippings and report to his desk. "First, what was that crack about the movies?"

Ed said, "The same thing that caused TV and radio to go on the blink is the cause of the movies failing to project correctly." He added, "For that matter, it's the cause of the Homespun Look fad."

The major flicked a switch and said into his intercom, "Immediate action. It has been suggested that the failure of cinema is connected with TV and radio phenomenon. Will communicate further in due course." He flicked the switch again. "All right," he said to Ed Wonder. "The complete story."

Ed told it to them. In all the details they wanted. He brought it right up to the last, and the disappearance of Buzz De Kemp.

When he had finished they continued to goggle him for a long silent moment.

Finally, Bill Oppenheimer coughed, as though apologetically. He said to the major, "What'd you think, Lenny?"

The major knuckled his chin and twisted his mouth. "I just gave up thinking," he said. "I've heard everything, so now I don't have to think any more."

Ed was irritated. "Oh, funnies we get," he said. "Big joke."

Oppenheimer said, hopefully, "You think we ought to just throw him out?"

"I didn't ask to come here," Ed growled. "I was kidnapped."

They ignored him. The major shook his head and said, "We can't throw him out. We can't throw anybody out until we've checked the story through all ways from Tuesday." He flicked his desk switch again and said, "If any of the following haven't already had pick-ups, get them. Also immediate completes on all. This is an 'AA' priority. Buzz De Kemp. Jensen Fontaine, Helen Fontaine, Matthew Mulligan, Ezekiel Joshua Tubber. Yes, I said Ezekiel Joshua Tubber. And Nefer-titi Tubber. All of Kingsburg, New York, except the last two, seen in Saugerties."

Oppenheimer sighed and spoke into his own intercom. "Alice, the tape we just cut. Do it up immediately. Fifty copies. The usual distribution. It's an 'AA' now. He sticks to his story."

They both looked back at Ed Wonder, wordlessly for the moment.

The major opened his mouth to say something. Closed it again.

Oppenheimer said, without inflection, "Hexes."

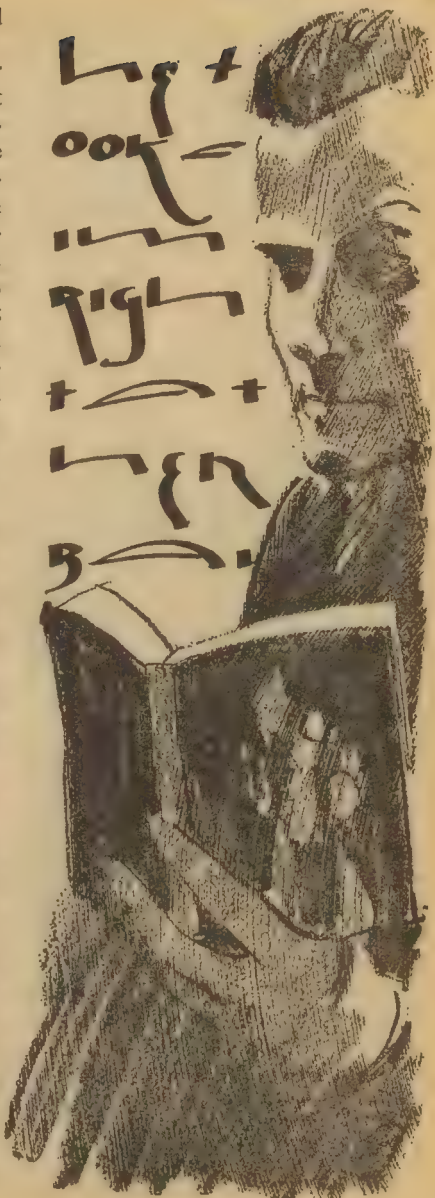
The intercom on the major's desk reported something. The major's eyebrows went up. "Send it in immediately."

Within moments a messenger entered, deposited two copies of a report on the desks, hurried out again.

Ignoring Ed Wonder, the two read.

Oppenheimer looked up. His eyes went to Major Davis. "Crash priority?"

"Yes." The major came to his



feet, reached for his tunic, said, "The hell with it." Then, in his shirt sleeves, tie still loose, headed for the door. He said to Ed Wonder, "Come along." Ed shrugged, got up and followed him. Oppenheimer brought up the rear, carrying the papers pertaining to Ed and the new report as well.

In the reception room, Johnson and Stevens shot to their feet and came forward.

The major said, "You're Mr. Wonder's guards?"

"Yes, sir."

The major beckoned to two of the other guards present. "You're released from your present assignment. You'll help guard Mr. Wonder. With your lives, if necessary. This is Crash priority."

"Yes, sir." All four of the guards brushed back coat tails so that quick draw holsters were revealed on their hips, and now instantly available.

"What the devil," Ed protested. He was ignored.

"Come along," the major said again, and led the way.

This time they ascended to the above floor. The bustle here was considerably less. They went through this hall, through that. Finally winding up before a door where a guard stood. As they approached, his hand went to his gun and remained there until the major and Oppenheimer identified themselves.

Oppenheimer said to him, "Another guest. There are six of you now. You'll take it in shifts. One man outside, one in at all times. I'll send Lieutenant Edmonds to ar-

range details. Until he turns up, all six of you stand-by."

He got a chorus of *yes sirs*, then opened the door and led the way inside. It was a lavish suite.

Buzz De Kemp looked up from the chair in which he was sitting reading a paperback novel. He grinned, took his stogie from his mouth and said, "Hi, Little Ed. So they picked you up too."

Ed Wonder was beyond surprise by now. He sat down on the couch and closed his eyes.

Oppenheimer and the major looked at the newspaperman. The former said, "We've just read your report on the Tubber affair. Largely, you corroborate what Wonder has just told us. That ups you from 'AA' priority to Crash."

"Well, good for us," Buzz beamed. "How many other Crash priorities are there?"

"Several hundred, at least, in the United Welfare States. How many in England, Common Europe and the Soviet Complex, I'd have to check again to find out. And possibly by this time the Allied Neutral States have got underway as well."

Buzz whistled silently. "This thing is getting really big."

"It's as big as a war," the major said flatly.

Ed was beginning to adjust. He said peevishly, "When do we eat around here? If I've got to be a prisoner, I ought to be fed once in awhile."

Oppenheimer said to him, "You're not a prisoner. You're a volunteer, working for the government."

"There's a difference?" he asked.
 "We'll get in touch with you shortly."

XVII

It wasn't shortly. It wasn't until the next morning. Meanwhile their guard system had been perfected and their needs met. They had spent several hours checking with each other, but it was largely a rehashing. Buzz De Kemp had on the whole had a similar experience to that of Ed Wonder. He'd been picked up by two agents and whisked to the New Woolworth Building. They had picked him up as the writer of the articles on Tubber. When he stuck to his guns, his priority rose from 'C' to 'AA' and then, when Ed Wonder's story corroborated his, to Crash.

They came for Ed and Buzz in the morning. Not Oppenheimer and Major Davis. Evidently, they were being dealt with by higher echelons now. It was a colonel with two aides who showed up to escort them to their next interview. A Colonel Fredric Williams of Air Force Intelligence.

Buzz stuck his paperback in his jacket pocket, saying, "Just in case we run into the usual bureaucratic red tape. You know, hurry up and wait, hurry up and wait. I'll take along something to read."

The colonel glared at him. Buzz leered back, scooped up a handful of the stogies he had ordered the night before and jammed them into a jacket breast pocket. "I'll need fuel, too."

They followed the colonel and his aides, and the guards brought up the rear, coats still brushed back so that guns were readily handy. Ed wondered what they thought the potential danger might be, tucked away here on the top floors of Ultra-New York's tallest skyscraper and surrounded by what seemed to be hundreds of security men.

Their destination was up still another floor, and this time there were two reception rooms, rather than one. The first was king-size, with a dozen busy desks and as many officers beyond. The second was small and presided over by a single middle-aged, less than matronly looking, efficiency machine.

She said crisply, "Mr. Hopkins is waiting for you, Colonel. The others have arrived."

"Thank you, Miss Presley."

The colonel himself opened the inner door.

Whoever the architect who had designed the New Woolworth Building might have been, he had surely realized that the ultimate floor was meant for ultimate authority of one sort or another. And this office bore that fact out.

Ed Wonder had never been in such an establishment in his life. Only Hollywood had prepared him for it. Even then, he looked about in amazement.

There was but one desk, which seemed to be suspended by one thin rod from the ceiling, rather than being supported on the floor. Behind it sat who was obviously Mr. Hopkins. And the reality of who Mr. Hopkins was came immediately

home to both Ed Wonder and Buzz De Kemp, the latter of whom reacted by whistling softly between his teeth.

Dwight Hopkins the Great Compromiser. Dwight Hopkins, the power behind the throne. Dwight Hopkins who dominated western politics like a colossus.

Dwight Hopkins avoided publicity. He had no need of it. However, the right hand man, the one man brain trust, some said the alter ego, of President Everett MacFerson could not remain completely unknown to the knowledgeable citizen. President MacFerson might be, and was, a figurehead, a symbol, a public image whose actual efforts so far as governing the nation was concerned, went little beyond those of the ruling monarch of Great Britain. But while the MacFerson glamour-type politicians might possess whatever it is which draws the votes of the populace, there still must be the Dwight Hopkinses behind the scenes. He had survived three administrations, having been handed down from the Democratic Republicans to the Liberal Conservatives and then back again, without change in either their policies—or his. There were seldom issues between the two parties under the Welfare State; it wasn't considered the thing to attempt to influence the voters by raising them. You voted for *the man you liked best*, not for principles.

Dwight Hopkins sat behind the small desk. To one side of him, in an easy chair, legs crossed, was a

major general. To the other, a tall, gray civilian. Across from him, in a row, were Jensen Fontaine, Helen Fontaine and Matthew Mulligan.

Ed shot his eyes around the room again. No mistake, The Tubbers were conspicuously absent.

Hopkins nodded to the newcomers. "You must be Buzz De Kemp, you look like a newspaperman. And you're Edward Wonder. Why do they call you Little Ed?" The Hopkins voice was firm but the urgency in it had a strange easy-going quality, as though there wasn't really any great hurry, now that Hopkins had taken over.

"I don't know," Ed said.

Mulligan blurted, "See here, Wonder, if all this is your . . ."

The major general rumbled, "That will be enough, Mr. Mulligan. Mr. Wonder is in the same position as you are. You've been brought here to help us clear up a matter that is of first importance to the nation."

"To the world," the tall, gray civilian said mildly.

Jensen Fontaine said hotly, "I demand to know if those communists down in Greater Washington think they can pick up citizens of good repute and . . ."

Dwight Hopkins was looking at the small-town magnate expressionlessly. He interrupted to say, "Mr. Fontaine. In your belief, what is the cause of the disruption of radio and TV and, further, of motion picture projectors?"

Jensen Fontaine bent a beady eye on the politician and said, leadingly, "My country, may she always be right . . ."

Hopkins said agreeably, "I agree with you, sir. But to answer my question."

Fontaine snapped, "I'll tell you the cause. Soviet Complex sabotage. Subversion of American industry. Underground . . ."

"And how would they have accomplished this?"

"That's not my job. You birds down in Greater Washington have been infiltrated. Even the Department of Justice. I suspect the C.I.A. could turn up the culprits soon enough if they weren't honeycombed with commie agents. Furthermore . . ."

Dwight Hopkins said, "You are free to go, Mr. Fontaine. Our thanks for your cooperation."

Fontaine was just getting into stride. He raised an arm to wave in emphasis, and it was taken firmly by Colonel Williams. "I'll show you to the door, sir."

Mulligan's eyes went from Hopkins to the semi-struggling Fontaine. "See here, you can't treat Mr. Fontaine that way!" he blatted.

The white Hopkins eyebrows went up. "Do your own opinions coincide with his, Mr. Mulligan?"

Mulligan was ushered out.

Dwight Hopkins looked at Helen, Buzz and Ed Wonder. "I have read the reports. You three were the ones I really wished to talk to anyway. I am sorry, Miss Fontaine, if my handling of your father seemed cavalier."

"Bounce it," Helen said, making a moue. "Daddy can use a little cavalier treatment."

The President's right hand man leaned back in his chair and regarded them solemnly.

He said, "A week ago Friday, TV and radio became inoperative. For several hours the government took no action. It was assumed that the industry would soon discover the cause and remedy it. However when it became known that the phenomenon was world-wide, an emergency committee was named. The following day, the President released special funds to increase the size of the committee and give it more arbitrary powers. The following day the committee became a commission. And the day after, in secret session, the Congress voted unlimited resources and I was named head of this project responsible only to the President. General Crew and Professor Braithgale, here, are my assistants.

Buzz De Kemp was evidently awed not even by such as Dwight Hopkins. He had brought one of his inevitable stogies from his pocket and as he searched for matches, said around it, "You people sure seem to be in a tissy over moron-level entertainment. The major was telling us, last night, it's as important as a war. And . . ."

"A nuclear war, Mr. De Kemp," Hopkins said.

"Don't be silly," Helen said.

Dwight Hopkins looked at the tall, gray civilian. "Professor Braithgale, will you enlighten us a bit on the ramifications of the situation which confronts us?"

The professor's voice was dry and clear, and he lectured, rather than conversed.

"What happens to a civilization when there is an economy of abundance and no publicly provided entertainment?"

The trio, Ed, Buzz and Helen, frowned simultaneously at him, but neither tried an answer. It was obviously rhetorical.

He went on. "The average human being is not capable of self-programming. At least as he is today. He can't think up tasks to occupy himself. He's never had to. Man evolved under conditions where the time and energy he had available were programmed for him; he worked, and he worked twelve to eighteen hours a day. All day, every day. Or he starved. What to do with his time was determined for him. What recreation there was, was very seldom; purely traditional games and dances were a vast relief and entertainment. He never got a chance to become bored with them—he got to play them too seldom. That situation lasted for 99.99 percent of the history of the species."

Braithgale eyed them, and his voice went drier still. "Now it's true that leisure is essential for creative activity. Until there is a leisure class, a group with time to do something besides subsist, there is damn little opportunity for cultural progress. *But*, leisure doesn't automatically produce creativity.

"So the question becomes, what happens to a culture with plenty of everything—except pre-determined activity for the non-creative average man? In other words, what happens to this affluent society, this Welfare

State of ours, if we take away radio, motion pictures, and especially television. Television, the common man's pacifier."

Ed was scowling. "Vaudeville," he ventured. "The legitimate theatre. Circuses. Carnivals."

The professor nodded. "Yes, but I submit that they would provide but a drop in the bucket, even when and if we get them organized and train the needed talent. How much time can people spend that way?"

Buzz brought his paperback from his jacket pocket and waved it at the other. "There's reading."

Braithgale shook his head. "The average human does not like to read. Mr. De Kemp. It requires that they contribute a great deal of mental activity themselves. They have to visualize the actions from the words, imagine the voice-tones, the facial expressions, and so forth. They are not up to such creative labor."

The professor seemed to switch subjects. "Do you recall ever having read of the riots which swept Constantinople during Justinian's reign as a result of a minor squabble over the horse races? Well, several thousands of persons lost their lives."

He remained silent for a moment, looking at them, to achieve emphasis. Then, "It is my belief that the thing that eventually destroyed Rome was the growth of an immense leisure class. Rome was no longer a subsistence culture, the colonies supported it. The populace was awarded free food. They had leisure but no self-programming creativity."

Braithgale wound it up. "A man

wants something to do. But if he hasn't the ability to invent something to do, what happens when you take away his TV, his radio, his movies?"

Ed said, "I've been reading of the riots in England — and in Chicago, for that matter."

The major general rumbled to Hopkins, "We've got to bear down some more on those damned journalists. They're letting too much of that sort of report get through."

Dwight Hopkins didn't answer him. Instead, he tapped a thick sheaf of papers on his desk and spoke to Ed, Buzz and Helen. "Frankly, your account astonishes me and leaves me incredulous. However, you have this in your favor; you corroborate each other. Hadn't it been for the matter of the cinema, which is utterly inexplicable in terms of atmospheric disturbances, I admit that I would not be inclined to consider your account at all. However . . . what is the trouble, Mr. De Kemp?"

They all looked at the rumpled newsman who was, in turn, goggling the pocketbook he held in his hands. "I must've picked up the wrong copy," he said, unbelievably. "But I couldn't have." He looked up at them, as though accusingly. "This thing's in French."

Ed scowled down at it, wondering at the other's confusion. "That's not French. It looks like German to me."

Helen said, "It's not German. I studied German a bit. It looks like Russian."

Buzz said defensively, "Don't be

silly. It's not even in the Cyrillic alphabet. I say it's French. But it couldn't be. I was reading it just before I came in here. And the cover illustration is the same and . . ."

Professor Braithgale unfolded his lanky form and came to his feet. "Let me see that," he said drily. "I can read and write in all the Romance languages, German, Swedish and Russian. I don't know what has come up but . . ." His sentence drifted off. His usually quiet gray eyes boggle. "It is . . . it is in Sanscrit, I think."

"Let me see that," Hopkins said crisply. "What's the controversy?"

The professor handed him the paperback suspense novel. "Why, it looks like Italian to me. I don't know the language but . . ."

"Holy smokes," Ed breathed. "He's done it again. He's hexed fiction."

"What!" the major general rumbled. "Are you utterly insane?"

"No, look," Ed was on his feet. "That report you have in front of you. You can still read it, can't you? I can. And I can read these papers I had in my coat pocket. And look at this newspaper." He was excitedly showing them. "The news you can read. But look here at the comic page. All the writing is jabber. It looks like German to me, but I don't read German. He's hexed fiction."

"Sit down," Dwight Hopkins rasped. Into his desk communicator he said, "Miss Presley. I want you to send in several books, both fiction and non-fiction. I also want an immediate report on why Ezekiel

Joshua Tubber and his daughter have not been picked up."

"Yes, sir," Miss Presley's efficient voice came through clearly. "The Tubbers have not been found, as yet. The operatives sent for them report that they have left Saugerties. Evidently, the itinerant preacher was extremely upset due to the fact that his message was not being listened to."

Hopkins said crisply, "Is there any hint as to their destination?"

"One of their followers said they were going to Elysium. There is no such community listed, sir, in any of the sixty-four States. It might be in Common Europe, or . . ."

"That will be sufficient, Miss Presley," Dwight Hopkins said. He flicked off the intercom and looked at Braithgale and then at the major general. The latter rumbled, "What's the matter?"

But Braithgale knew what the matter was. He said, slowly, "Elysium. Another word for the Elysian Fields of the ancient Greeks."

"What in hell are the Elysian Fields?" the general demanded.

Dwight Hopkins said, "Paradise." He ran a hand over his chin, as though checking his morning shave. "Our friend Tubber has gone to Heaven."

XVIII

"Heaven!" Colonel Fredric Williams blurted from the background where he had been keeping his trap shut through all this. "You mean this necromancer is dead?"

Ed Wonder was shaking his head. "That's not it. Elysium is some goblydygook word they use in this new religion of Tubber's. They talk about being pilgrims on the road to Elysium, that sort of thing. Elysium is, well, sort of like Utopia, except Tubber is against Utopia. He says the idea is reactionary. I forget why. Something about Utopia being perfect, and perfection means stagnation, or . . ."

"Wait a minute," Braithgale said, "you're giving me a headache."

"Talking about Zeke Tubber and his religion would give anybody a headache," Buzz said. "How do you get a drink around here?"

"You don't," General Crew rumbled.

"Oh, real military, eh?" Buzz took his stogie from his mouth and looked at the tip. "Guess what? I'm an alcoholic. I can't think very well without a couple of belts. And I think I know where Tubber and his daughter have gone."

Hopkins said into his communicator. "Miss Presley, a bottle of . . ." he looked at Buzz.

Buzz said, "Rye."

". . . rye whiskey," Hopkins continued.

"And two glasses," Helen Fontaine said.

"Three," Ed said.

Hopkins looked at Braithgale, Colonel Williams and finally General Crew, then said into the intercom, "And seven glasses with appropriate ice and mixer."

He looked back at Buzz. "Are you really that far gone as an alcoholic?"

"No," Buzz said. "I just wanted a drink."

"I can use one myself. Very well, the drink is on its way. Now then, you say you know where this Tubber is."

Buzz said, "A cooperative colony near Bearsville, in the Catskills. I heard Tubber mention the place in one of his talks. He invited anybody in the audience who was ready for . . ." Buzz twisted his mouth. ". . . the promised land, to come to Elysium and join up. It's evidently in the tradition of Robert Owen's New Harmony colony, Llano, down in Louisiana, and Josiah Warren's Village of Equity."

Major General Crew rumbled. "What are you talking about, Mister?"

Professor Braithgale was looking at Buzz with a new respect. He turned his head and said to the army man, "Cooperative colonies. Utopias. There was quite a movement in their favor back in the 19th Century. Most were based on religion, some not. The Latter Day Saints, the Mormons, turned out to be the most successful. They were intelligent enough to adapt when this teaching or that didn't prove out. The others went under."

Ed said, "We might have known they didn't go very far. Tubber travels in a horse and wagon."

"Whoresonvagen?" the general rumbled. "What's that, some new German model?"

"Horse and wagon, a horse and wagon," Ed told him. "A wagon pulled by a horse."

The army man stared at him in disbelief. "You mean like in a Western movie?"

"Please, Scotty," Dwight Hopkins said, without looking at him. The general shut up and Hopkins said to Ed Wonder thoughtfully, "You seem to be our best authority on Ezekiel Joshua Tubber."

He was interrupted by the arrival of Miss Presley who bore an armload of books. Even the efficient Miss Presley was looking as though something a bit disconcerting had happened, such as Gabriel blowing his horn, or the Atlantic disappearing. She put the books on Hopkins' desk and said, "Sir, I . . . I . . ."

"I know, Miss Presley. That will be all for the time. Just get that whiskey in here. And, Miss Presley . . ."

"Yes, sir."

"You had better have a tot yourself."

"Yes, sir." Miss Presley was gone. Miss Presley looked as though she had never had a quick one in her life. But Miss Presley also looked as though she was going to set a precedent.

Dwight Hopkins took the books up and examined them one by one, while the others looked at him. He put the last one down and rubbed his eyes with his forefingers in resignation. "It still looks like Italian to me."

The general blurted, "All of them?"

"No. Not all of them. The non-fiction is still readable. In fact," he picked up one hard cover volume,

"this novel is still in English. *Huckleberry Finn*."

"*Huckleberry Finn*?" Helen said. "Mark Twain?"

Ed Wonder closed his eyes in mute appeal to high powers. "Oh, great. This is a new one. This hex is selective. Anything Tubber doesn't like, becomes jibberish. Anything he approves of, we can still read. Holy smokes, talk about censorship. I thought I noticed something about that page of comic strips."

"What was that?" Buzz asked him.

"I can still read *Pogo*. Buzz Sawyer, Junior and Little Orphan Annie were jibberish, but I can still read *Pogo*."

Professor Braithgale took up the newspaper. "You're right," he said. "At least our prophet has a sense of humor."

"Oh, *Mother*," Helen muttered. "All I can say is that we'd better develop one too."

The whiskey came in, borne by one of the guards who had been assigned to Buzz and Ed. It was noticeable that the bottle had been opened and one good charge was missing. Miss Presley obviously took Dwight Hopkins' instructions literally.

The drinks distributed and being worked upon, Hopkins looked back on Ed Wonder. He said slowly, "Mr. Wonder, when your group entered this office, I was admittedly prone to think you just one more set of the eccentrics we have been digging up since the crisis first arose. Now, however, this has developed

to the point where no scientific explanation seems possible. I am ready to throw this commission's full resources behind you."

"Behind *me*?" Ed blurted. "Why *me*?"

The President's right hand man was unfazed. "Because you are our nearest thing to an authority on Ezekiel Joshua Tubber. You were present at three of his, ummm, performances. Besides, as the director of your Far Out Hour, I am sure you are highly knowledgeable in the field of the, ah, far out. And certainly this is about as far out as it is possible to get."

"But . . ." Ed wailed.

Dwight Hopkins held up a hand. "I do not mean to suggest that your hypothesis — that Ezekiel Tubber has caused our crisis by a series of curses — is the only one my commission will continue to investigate. Far from it. However, we will set up a new department with you at the head and with full resources."

"No," Ed said with finality.

Buzz looked at him strangely. He said around his stogie, "You haven't said yet, *what's in it for me*? Little Ed."

Ed Wonder turned on him desperately, "I know what's in it for me. Sure I was present at three of his performances, as Hopkins calls them. I've seen the old buzzard three times and each time the results were worse. What do you think will happen next time? He's getting arrogant . . ."

"*Getting* arrogant?" Braithgale laughed bitterly.

"... he's beginning to feel his oats." Ed swung on Hopkins. "He started off innocent. Not knowing what he was doing. Evidently, one of his first curses was brought on by some teenager practicing hill billy on his guitar. Tubber broke the guitar strings..."

"What's miraculous about that?" the general rumbled.

"... at a distance. Then there was something else that brought him to wrath, as his daughter calls it. A neon sign, or something. So he laid a curse on it. What happened, I don't know. Maybe it stopped flickering."

From the background Colonel Williams said, "I wish he'd lay a hex on the neon sign across from my house. The damn thing..."

General Crew looked at him and the colonel shut up.

Ed said desperately, "When he laid that Homespun hex on women, he didn't know he had done it. Evidently when he gets really wrathed up, he forgets what he says. He was astonished when I told him he'd cursed radio. As surprised as anybody else that it'd worked. But look at this now. He's cursed all light reading. All fiction — except what he likes. Listen, I'll bet you he wasn't even sore when he laid that one on."

Dwight Hopkins finished off his highball. "I'm becoming more convinced by the moment," he said. "And Wonder, you're our man."

"I am not. I keep telling you. This kook is as nutty as almond cookies. Suppose he spots me and is reminded all over again of some of the

arguments I've had with him, remembers that hardly anybody'll listen to him. Suppose he gets wrathful again and lays down a hex on all unbelievers. You know what that'd mean? He doesn't have more than a couple of hundred believers all together. I tell you, that twitch is more dangerous than the Hi-Bomb."

General Crew said thoughtfully, "A sniper. The best marksman in the service. Posted on a hill, with a Winchester Noiseless and a Mark 8 telescopic sight. This Elysium, from what De Kemp has said, is in the hills. A small community, away from any city. A sniper..."

Buzz grinned at him. "And how about this possibility, General? Suppose something goes wrong and Zeke lays a spell on gunpowder? Better still, all explosives? What would happen to the Cold War thaw if all of a sudden no explosives would work?"

The general scowled at him. "The curses are universal. In that case, explosives wouldn't work for the commies, either."

Buzz took his stogie from his mouth and examined the tip, which was burning unevenly. "They wouldn't need explosives," he said. "The Chinese alone could overrun us with butcher knives made in those backyard steel mills of theirs."

Helen said, "Besides, assassination is out of the question. Actually, like Buzz was saying the other day, Tubber is a kindly old gent who just happens..."

"Kindly old gent," Ed muttered.

"... to have some powers we simply don't understand. He doesn't seem to understand them either. Very well. I think Little Ed should go and confront him. There's nothing to suggest he has anything against Ed personally. Besides, he dotes on that daughter of his and she has a crush on Little Ed."

Silence dropped. All eyes went to Ed Wonder.

Ed lowered his lids in utter suffering. "That's a lie!" he wailed.

"Buzz?" Helen said.

Buzz De Kemp had been trying to get his stogie to burn straight. Now he nodded and said with a twang. "Yep, right as rain. Nice curvy little wench, blue eyeballs, cheeks shiny as red apples, set up real nice. And any sapsucker can see there's nothing better she'd like to do than spoon with Little Ed Wonder."

"Oh, great," Ed moaned. "Funnies."

Dwight Hopkins said, "Wonder, I'll have an office and staff assigned to you."

"No," Ed said.

Dwight Hopkins looked at him deliberately. "I can pick up this phone, Mr. Wonder, and in moments have a Presidential order drafting you into the armed forces. In which case you will be under the orders of General Crew, here, and will do as you are told."

Ed muttered, "The old army volunteer system. You, you, and you."

The general beamed at him.

Ed surrendered. "All right," he said. "How about having another drink?"

XIX

For approximately thirty of his thirty-three years, Edward Wonder had wanted to be a big executive. He had wanted it so badly he could taste it distinctly. And to the extent possible in a stratified, stagnant society he had worked to that end. He had been raised in the folklore of his people including that wheeze about any citizen of the welfare state being just as good as any other citizen of the United Welfare States and with an equal chance of working his way up to the presidency, or wherever. Unfortunately, he discovered that it's hard working one's way up, when there is precious little work to do, and the overwhelming majority displaced by automation. Those who did still maintain jobs, and hence higher incomes than those on the unemployment lists, clung to them. Cherished them with a bitter jealousy, and to the extent possible passed them on to progeny, relatives, or at least friends.

No. As he had grown older, it had become increasingly obvious just how small a chance Ed Wonder had of ever becoming a big executive with underlings to do his bidding, telephones and intercoms in which to snap his profound orders. In fact, at the time of his first confronting of Ezekiel Joshua Tubber, he had about decided that his sole chance was going to be through marriage with Helen Fontaine.

But now he was a big executive.

And Helen Fontaine was one of his assistants.

So was Buzz De Kemp, and Ed was acquiring more assistants by the minute. In fact, he was swamped with them.

Dwight Hopkins' promise of resources couldn't have been more highly fulfilled. Within a quarter hour, Ed Wonder had been assigned a suite of offices. Within the hour, his staff was moving in. Among others, Mr. Yardborough, whose first name turned out to be Cecil, and Bill Oppenheimer and Major Leonard Davis. Two of the leg men were Johnson and Stevens, and Ed's liaison man with Dwight Hopkins was Colonel Fredric Williams. Hopkins had decided that Project Tubber should be on the ultra-hush side, in view of its nature, and assigned to it anyone who had already anything to do with Wonder's investigation. Had the story broken in the newspapers, Hopkins suspected even his gilt-edge reputation wouldn't have been done any good.

Ed stared gloomily at his desk screen.

He hadn't the vaguest idea where to begin. In his files were nothing more than his own report on Tubber. Buzz's report and that of Helen Fontaine. It was no use looking at them. He knew everything covered. Which was precious little.

He flicked the screen to life and cleared his throat. "Miss . . . ah . . ."

"Randy, sir. Randy Everett."

Ed looked at her and sighed. "Randy, on you the Homespun Look is unfortunate."

"Well, yes sir. But to tell you the truth, if I wear cosmetics . . ."

"You itch," Ed interrupted.

Her eyes widened. "How did you know?"

"I'm a crystal gazer," Ed told her. "Look, send in Mr. De Kemp." He flicked off the intercom. It was his first act as head of Project Tubber.

Buzz came shambling in, stogie at the tilt. He looked about the office appreciatively and whistled softly between his teeth. "So, at long last Little Ed Wonder is a big shot. Work hard, have your money, and vote straight Democratic Republican and you too can get to the top. Shucks, you didn't even have to marry the boss's daughter."

"Shut up," Ed told him, "or I'll get General Crew to draft you into the service." He grunted at the picture. "Buzzo De Kemp, the sloppiest yardbird in the army."

"Jollies we get," Buzz said.

"Listen, Buzzo," Ed said. "What do I do first?"

Buzz looked at the tip of his stogie critically, then let his eyes go around the office in thought. "First," he said, "I think you better get an autobar in here."

Ed looked at him.

Buzz said defensively, "I've got one in my office, but we can't always be running in there. You're the head of the project."

"All right, then what?"

Buzz said, "Then we might go about finding out what a curse is. The next time we — you, that is, I'm going to be A.W.O.L. at that point — the next time you go up against Tubber, it'd be better if you had some ammunition."

"A curse? Everybody knows what a curse is."

"So fine. What?"

Ed thought about it. He flicked his desk switch. "Major Davis, please." Lenny Davis' face appeared in the screen.

"Yes, sir." The major wasn't yet quite used to having as his chief the man he'd been interrogating and considering throwing out of the office but a day previously.

Ed said, "We want to find out just what a curse is. Send in some scientists who know what curses are."

The major looked at him blankly. "What kind of scientists know what a curse is, sir?"

"How would I know?" Ed told him curtly. He flicked off the set.

Buzz De Kemp was indeed impressed.

Ed said, "What do we do now?"

"Have lunch," Buzz told him.

"Let's go into my office and have a belt first. We ought to pick up Helen. What's Helen doing?"

"She's in charge of the Homespun Look department," Ed said.

"She's going to find out everything possible about the Homespun Look."

Buzz looked at the end of his stogie. "That's a good idea. You got some scientists working with her?"

Ed Wonder pursed his lips. "No. You're right. If we've got unlimited resources, we better use them. The devil only knows how much time we've got before Tubber goes into his act again." He flicked on his desk switch. "Major Davis."

The major's face was even slightly



more harassed than it had been the evening before, Ed decided. The major said, "Yes, sir."

"Lenny," Ed told him, "send up a few scientists to Miss Fontaine's office. We want to know what it is that makes women itch."

The major opened his mouth, shook his head, and closed it again. "Yes, sir."

When the army man's face had faded from the screen, Buzz looked at it thoughtfully. "You know," he said. "I don't think the major is going to last very long. He's already getting sort of a greenish look around the gills."

Ed Wonder stood up. "There's more where he came from," he said. "Now, that belt before lunch."

When they got back from lunch and crossed the outer offices of Ed Wonder's suite, he could only notice that they'd moved in another score or so of staff, and a selection of I.B.M. machines complete with operators and files of punched cards. Ed wondered vaguely what they were going to use them for. Possibly nothing. Dwight Hopkins probably just wanted them to be handy and ready, just in case a use for them did come up.

Randy, his receptionist, said, "Professor McCord is waiting in your office, Mr. Wonder."

"Who the devil is Professor McCord?"

"Major Davis sent him, sir."

"Oh, he's probably an expert on either hexes or itching, then."

After Ed and Buzz had entered the inner office, Randy Everett look-

ed after them for a long frustrated moment, somewhat as though she had put her last dime in a pay telephone and got the wrong number.

Professor McCord came to his feet at their entry. They went through the usual banalities, finally winding up seated.

Professor McCord said, "I was picked up by two security officers and rushed here to your office. I submit that although I am available for my country's service, I haven't the vaguest idea of . . ."

Ed said, "What are you a professor of?"

"Ethnology, specializing in the African Bantu tribes."

Buzz said, selecting a fresh stogie from his jacket pocket, "The major is sharper than I thought he was. Professor, what is a curse?"

The other's eyes came around to the newspaperman. "You mean in the sense that a witchman might curse someone?" When the two nodded, he went on. "It is the expression of a wish that evil befall another. A calling down of something wicked, harmful on some victims."

"Well, that's not exactly the word, possibly," Ed Wonder said. He wished he had listened to Buzz about having an autobar installed in his office. There was something about this whole affair that seemed to call for another drink. Not just a drink, but another drink. "Possibly the word I want is spell, or hex."

The professor obviously hadn't the vaguest idea of what they wanted of him. He said, "A spell is usually a combination of words, or

pretended words, supposed to accomplish something magical. The term, if I'm not mistaken is derived from the Old English. A hex is much the same thing, an act of witchcraft. It is American idiom, originally derived from the Germanic." The professor was frowning puzzledly.

So were both Ed Wonder and Buzz De Kemp.

Ed said, "I know, I know. But I didn't want just definitions. Now, take one of your Bantu witchdoctors. He puts a spell on somebody, usually because somebody else paid him to do it, right? Okay. Just what does he *do*?"

Professor McCord looked at him blankly.

Buzz said, "How does he go about it? How is it accomplished?"

The professor said, "Well, in actuality, each witchman will have a different procedure. Usually an elaborate mumbo-jumbo involving unusual ingredients to stir together, and an incantation involving magical words."

Ed leaned forward. "We know that. But, what we wanted to know was, just what *is* a curse? You know, what *is* it . . .?"

The professor blinked at him.

Buzz said, "This is making me thirsty." He got up and left the office.

Ed looked after him plaintively. He turned back to the professor. "What we're trying to do is find out what a curse, a hex, a spell really is."

"Why, I just told you."

They looked at each other for a long unprofitable moment. Finally, Ed reached out and touched the intercom switch. "Randy."

"Yes, sir."

"Have an autobar moved in here soonest."

He flicked off the intercom and turned back to the professor. "Do you believe in the devil? You know, Lucifer?"

"No. What has that got to do . . ."

"Or black magic?"

"I don't believe in any kind of magic."

Ed had him. He pointed a finger. "Then how come a witchdoctor can cast a spell on somebody? Don't tell me they can't. Too much evidence exists."

"Oh," Professor McCord nodded. "I see what you're driving at, at last. Do you know what a liban is? I took my doctorate in their study."

Buzz De Kemp came back in with a bottle and three glasses. The glasses contained ice. Buzz put the things down on Ed's desk.

The professor said stiffly, "Not for me. Not at this time of the day."

Buzz leered at him, and poured drinks for himself and Ed Wonder. He carried his drink back to his chair and sat down and said, "How far have we got?"

"We've got to libans," Ed said. Then to the professor, "No, I thought on my kooky Far Out Hour I'd heard of everything in this line, but evidently not."

The ethnologist's face took on a pleased expression. "The libans are such a vital part of African witchcraft that I'm amazed they are

known so little. A liban isn't exactly a witchman, since he's born into the caste and can't enter into it from outside. They're just a handful of families, not numerous. He's the *eminence grise* in the tribe and they wouldn't dare do anything without his advice. For instance, if the warriors are going out on a raid, he lets them know whether or not it's going to be a success, gives them little bags of sacred dust, or some such, to tie to their daggers. What I wish to impart is that the liban is not a fake. His position is hereditary, comes down for a thousand years and more. Believe me, if a liban puts a curse on a tribesman, the curse works."

"How?" Buzz said flatly.

The professor looked at him. "Because everybody involved knows it will work. The victim, the liban, and all the other members of the tribe."

It was the same sort of answer Ed had got from Varley Dee. It accomplished nothing. The fact of the matter was, hardy anybody, of all the billions of persons involved, even knew that Ezekiel Joshua Tubber existed, not to speak of knowing he was laying hexes right and left.

Buzz said to Ed, "What's all this about libans got to do with Tubber?"

"Tubber?" Professor McCord said. "Tubber who?"

"Ezekiel Joshua Tubber," Ed said wearily. "You wouldn't know about him."

"You mean *Josh* Tubber?" McCord said. "Academecian Ezekiel Joshua Tubber?"

"Academecian?" Buzz exclaimed.

"Josh was taking his academecian degree in political economy while I was studying for my doctorate," McCord said. "A surpassing scholar."

Ed Wonder closed his eyes in mute appeal to the higher ups.

But Buzz said quickly, "Then you knew him when he was younger. Look, at that time did he have any ideas about starting, say, a new religion? A religion with a lot of socio-economic angles?"

Ed said, "More important, did he ever say anything to you about an ability, a power to curse things? To put a spell on, well, ha ha, say TV?"

Professor McCord said, "Don't be ridiculous."

Ed flicked his desk switch. "Bill Oppenheimer," he said.

Oppenheimer's face filled the screen. It was the first time Ed Wonder had seen the other since his interview of the day before. Oppenheimer said, "Yes, sir."

Ed said, "You're in charge of backtracking on Tubber. As a beginning, we've got a line on his schooling. He took an academecian's degree in economics at . . ." he put a hand up to hold Oppenheimer and looked at McCord. "What college?"

"Harvard."

Ed Wonder looked at him in reproach. "It couldn't have been some jerkwater college in the Bible-belt. It has to be Harvard." He looked back at Oppenheimer. "Harvard. Put a team on this. We want everything, anything, we can get on Tubber. What he studied. Every book he ever opened has to be analyzed,

word for word. Run down his classmates, and find out every detail they can remember. Dig into his social life. Latch onto any women he ever dated, they'd be at least middle-aged now. He's got a daughter. Find out who he married. What happened to her. If she's still alive . . . Well, I don't have to tell you. We want a complete rundown on every phase of Tubber's life. Clear this with General Crew, if necessary. If you need manpower, there's the F.B.I., the C.I.A. and the Secret Service."

"Got it," Oppenheimer said. "Yes, sir." His face faded from the screen.

Buzz said, "That's telling them. Little Ed, you've got the makings of a really big cheese."

McCord said, somewhat intrigued, "If you're interested in checking on Josh Tubber, you won't get much at Harvard. He took only his academecian's degree there. As I recall, he took his doctorate at the Sorbonne, and if I'm not mistaken, studied earlier at either Leyden or Heidelberg. Classical Philosophy, I believe."

"Philosophy?" Ed Wonder repeated.

"A predilection for Ethical Hedonism, as I recall," McCord nodded.

Buzz finished his drink, as though desperate. "Hedonism," he said. "Tubber? You mean like the eat, drink and be merry for tomorrow we die, bit?"

"Hedonism goes further into reality than that, you know," McCord said stiffly. "Briefly, Epicurus taught that men not only in fact seek pleas-

ure, but further that they ought to do so since pleasure alone is good. However, his definition of —"

"All right," Ed said. "So Tubber put in a hitch studying philosophy. Look, Professor, I'm going to turn you over to a brace of my assistants who'll take down everything you can remember about Tubber, and also everything you can think of about libans, witch doctors, spells and cures."

When the professor was gone, Ed looked at Buzz who looked back at him.

Ed said, "I ordered an auto-bar to be put in here."

Buzz said, "They're taking their time. I thought this project was Top Crash Plus."

They looked at each other some more.

Finally Ed flicked his screen and said, "Major Davis." When Davis's face faded in, Ed said, reproachfully, "Lenny, ethnologists might be scientists but they don't know what curses are. Round us up some scientists who can tell us what a curse is. Snap into this, Lenny. We want results."

Major Leonard Davis looked at him plaintively, opened his mouth in what was obviously going to be protest or at least complaint, but then closed it again. "Yes, sir," he said. "Scientists who know what a curse is." His face faded.

Buzz said approvingly, "You're catching onto this routine fast."

Ed said, "I wonder where that auto-bar is."

They looked at each other some more.

Finally Ed flicked on his switch and said, "Get me James C. Westbrook. He lives just south of Kingsburg."

Randy said, "Yes, sir," and in moments, Jim Westbrook's face faded in on the screen.

He said, "Hello, Little Ed. Sorry, I'm awfully busy. If you don't mind . . ."

Ed Wonder ignored his words. "Listen, the other day when we were talking about miracles, you said you believed in them. That is, that you believe in things happening that we can't explain by our present scientific knowledge."

Jim Westbrook, in the phone screen, looked as though he was in a hurry, but he took the time to say, "I'm glad you qualified, friend, I don't like the term miracle."

Ed said, "Well, look, do you believe in hexes?" He waited for the other's disclaimer.

"Sure," Westbrook said. "I've looked into the subject a bit."

"Now, I'm not talking about this voodoo sort of thing where the victim is convinced he's going to fall sick, if the voodoo priest puts a spell on him, and then, of course, does. I mean . . ."

Westbrook said, "Really, I'm in a hurry but . . . Look, friend, the witchman does not have to convince his victim he's going to be a victim. The victim gets convinced because he *does* get sick. I've found that it most bodaciously is not something to play games with. It does not depend on faith or belief, on either the part of the victim or of the practitioner. In the same way that dows-

ing rods work for people who are completely positive they don't work."

"Go on," Ed told him.

"Hexing happens the same way. I found out at one Halloween party. If you want some, well, unusual, let's say, emotional feelings, try figuring out how to go about taking off a hex you didn't believe you could put on, because hexes don't exist, only the poor victim is damn well hexed and you don't know anything about unhexing whatsoever. Friend, it's about six degrees worse than the amateur hypnotist who's gotten somebody into a trance, imposed a post-hypnotic suggestion, and now can't un-suggest the thing. At least, there are books on hypnotism in the libraries to tell what to do in that case. But try finding a book on unhexing somebody you've accidentally and unbelievably hexed. Friend, it's a matter of *I didn't know the gun was loaded!*"

Jim Westbrook began to say more, but then darted a glance down at his wrist. "Listen, Little Ed, I can't spend any more time with you talking about hexes."

"That's what you think," Ed grinned at him.

Westbrook scowled. "What does that supposed to mean, friend?"

Ed said, happily, "You've just been drafted into talking your head off about every aspect of hexes."

The other said, "Little Ed, you better see a doctor. So long." He cut the connection.

Ed Wonder said, happily, "Stereotype, eh?" He flicked the intercom switch. "Major Davis," he said.

The major's face came on and he said, both warily and wearily, "Yes, sir."

"There's a James C. Westbrook, who lives on the outskirts of Kingsburg. Have him brought in immediately and take down everything he knows about hexes. And, Major, listen. He might not want to come. However, he's, ah, Crash priority. You'd better send four men."

"Yes, sir, to speed things up, do we have anything else on him, sir? Where does he work? What does he do? He might not be at home."

Ed Wonder said, "He's a consulting engineer, specializes in rhabdomancy."

"Rhabdomancy," Major Davis said blankly.

"Yes, rhabdomancy, radiesthesia. He operates dowsing rods."

Major Davis looked as though he had been cruelly hurt. "Yes, sir. Crash priority. Pick up this man who operates dowsing rods."

XX

Ed Wonder had been assigned an apartment in the New Woolworth Building while Helen Fontaine and Buzz De Kemp found accommodations in nearby hotels. In the morning, Ed Wonder got down to his office early, but evidently not early enough. His assistants, male and female, in the outer offices were in a flurry of activity. He wondered, vaguely, what they were doing. He hadn't issued enough in the way of directions to have kept a fraction of them busy.

He stopped at one desk long

enough to say, "What are you doing?"

The young man looked up. "Incantations," he said. He had a pile of books, pamphlets and manuscripts before him and a mike connected to a dicto in his left hand.

"Incantations?" Ed said.

The other had gone back to his perusal, now he looked up again. He obviously didn't recognize Ed as his chief. For that matter, Ed didn't recognize him. He had never seen him before.

The other said, "Incantations. The chanting or uttering of words purporting to have magical powers. I'm accumulating basic data."

"You mean we've got a full-time man working on nothing but finding out about incantations?"

The young man looked at him pityingly. "I'm translating incantations in Serbo-Croat. They've got fifty-odd others on other languages. Now, if you'll please excuse me." He went back to his books.

Ed Wonder went into his own office.

There had been a few matters which had come up that Randy Everett informed him about. The extent of the offices allotted to Project Tubber had been upped considerably during the night, and the number of personnel. They were now working on a three shift basis. Ed hadn't known about that. Mr. De Kemp hadn't come in yet but had called to let them know he was feeling indisposed.

At that point in Miss Everett's report, Ed snarled, "Indisposed. Call that bum and tell him to get in

here, hangover or no hangover. Tell him I'll send a squad of marines, if he doesn't."

Randy said, "Yes, sir."

Ed said, "Put Major Davis on."

The face that faded into the phone screen had a major's leaves on the shirt collar, but it wasn't the face of Major Davis.

Ed Wonder said, "Where's Lenny Davis?"

"Davis isn't with us any more, sir. He had a breakdown of some sort or other. My name is Wells."

"Oh, he did, huh? Well, look here Wells, no more breakdowns among you army types, understand?"

"Yes, sir."

"If there are any breakdowns around here, I'll have them."

"Yes, sir."

Ed tried to remember why he had called Major Davis, and couldn't. He flicked off the screen. It lit up again immediately to display the face of Colonel Frederic Williams.

The colonel said, "Dwight Hopkins wants to see you immediately, Wonder."

"Okay," Ed said. He got to his feet. He wished that Buzzo was here to back him. There were angles to this big executive bit.

At the entry to Project Tubber, Johnson and Stevens, the two security heavies, fell in behind him. Evidently, he was still under guard. It was just as well. He couldn't have found his way to the Hopkins offices otherwise. He had the vague feeling that this whole commission, or whatever its official name was, had grown by half again, during the

night. The crush was greater in the corridors, still more equipment was being shoved up and down the halls, and more offices were being filled with desks, files, phones, intercoms and all the other paraphernalia of bureaucracy.

He was admitted immediately to Dwight Hopkins' presence and found the President's right hand man winding up a conference with fifteen or twenty assorted, efficient-looking types, only several of whom were in uniform. Ed wasn't introduced and the others filed out with the exception of Professor Braithgale, the only one among them all that Ed Wonder had recognized.

Hopkins said, "Sit down, Mr. Wonder. How does Project Tubber go?"

Ed held up his hands, palms upward.

"How could it go? We just got started yesterday afternoon. We're investigating the nature of a curse. Or at least trying to. And we're trying to get as complete a rundown on Tubber as we can, on the off chance that we'll find some clue to how he got this power of his."

Hopkins shifted slightly in his chair, as though what he was about to say didn't appeal to him. He said, "Your hypothesis, the Tubber hypothesis, is strengthening in its appeal, Mr. Wonder. It occurs to me that one aspect of this crisis might be unknown to you. Did you know that radar was not affected?"

"I wondered about that," Ed told him.

"But that isn't what has our technicians rapidly going out of their minds. Neither is radio as used in international commerce, shipping, that sort of thing. But above all, neither are educational motion pictures. I spent an hour last night, on the edge of insanity, watching the current cinema idol, Warren Ware, come through perfectly in a travelogue sort of documentary used to promote the teaching of geography in our high schools. He had donated his time. But when we attempted to project one of his regular films, *The Queen and I*, using what our research people assured me was identical type film and using the same projector, we got that fantastic hold-over of the image on the screen."

Dwight Hopkins' gaze was steady, but there was somehow, behind his eyes, a frantic something.

Ed said, "TV, in the way we use it in telephones, isn't effected either. The curse is selective, just like in books. Non-fiction isn't effected, nor even the kind of fiction Tubber likes. What the devil, not even his favorite comic strip is changed. But none of this is news, why'd you bring it up?"

Professor Braithgale spoke up for the first time. "Mr. Wonder it was one thing considering your hypothesis along with anything, absolutely anything, else. But we are rapidly arriving to the point where your theory is the only one that makes sense. The least sensible of all comes nearest to making sense."

"What happened to sun spots?"

Hopkins said, "On the face of it, such activity might disrupt radio, but it would hardly be selective. At the remotest, it wouldn't exercise censorship over our lighter fiction."

"So you're beginning to suspect that I'm not as kooky as you first thought."

The bureaucrat ignored that. He said, "The reason we brought you in, Mr. Wonder, is that we wish to consult you on a new suggestion. It has been proposed that we use telephone lines to pipe TV programs into the homes. A crash program would be started immediately. Within a month or so every home in the United Welfare States of America would have its entertainment again."

Ed Wonder stood up and leaned on Dwight Hopkins' desk and looked down into the older man's face. "You know the answer to that silly idea as well as I do. How would you like to upset the economy of this country by fouling up telephone and telegraph, to go along with TV and radio?"

Hopkins stared at him.

Ed Wonder stared back.

Braithgale coughed. "That's what we were afraid of. Then you think . . ."

"Yes, I do. Tubber would lay a hex on your new-wired TV as soon as it started up."

It seemed a stronger Edward Wonder than they had spoken to only the day before. Dwight Hopkins looked at him calculatingly. He said, finally, "Professor, suppose you tell Mr. Wonder the latest developments pertaining to the crisis."

Ed returned to his chair and sat down.

The tall, gray professor's voice took on its lecture tone. "Soap box orators," he said.

"What in the devil is a soap box orator?" Ed demanded.

"Possibly a bit before your time. They were already on their way out when radio began nationwide hook-ups and the programs began to offer consistent entertainment to the masses. We still had a remnant of the soap box orators in the 1930s but except for a few anachronisms such as Boston Common and Hyde Park in London, they disappeared by the middle of this century. They are open air speakers who talk to their audiences from improvised stands. In the old days, when large numbers of our people strolled the streets of a pleasant spring or summer evening, these speakers were able to attract and hold their audiences."

"Well, what did they talk about?" Ed scowled.

"Anything an everything. Some were religious cranks. Some had things to sell such as patent medicine. Some were radicals, Socialists, Communists, I.W.W.s, that sort of thing. This was their opportunity to reach the people with whatever their message might be."

Ed said, "Well, so what? Let them talk. It'll give the people something to do, especially until you get the circuses, carnivals and vaudeville going again."

Braithgale said. "Don't lay too much store by live entertainment, Wonder. Only a limited number of

persons can watch a live performance. Vaudeville becomes meaningless if you are too far from the stage, so does legitimate theatre or a circus. Perhaps it was that which bankrupted Rome. They had to build ever more arenas so that their whole population could crowd into them. They simply couldn't keep that many shows going."

"But what's wrong with these soap box orators?"

Braithgale said, "Mr. Wonder, with the coming of cinema, radio, and finally, capping it all, television, the voice of dissent faded from the land. Minority parties and other malcontents could not afford the high costs of utilizing these media themselves. They were thrown back on distributing leaflets, pamphlets and little magazines or weekly newspapers. And, of course, we know how few people actually read anything necessitating concentrated thought. Even those of us who do read are presented daily with so much material that we are highly selective. In pure self-defense, we must look at the title or headline of the reading material offered us, and make a quick decision. Few in the minority groups have the skills or the resources to present their material in the attractive manner in which the more oppulent publishers do. It boils down to the fact that the beliefs of the dissenters against our affluent society have not been reaching the people."

It was beginning to get through to Ed Wonder.

Hopkins finished the story. "But now, every night, there are tens of

thousands of belligerent amateur orators standing on our street corners, harranging people with nothing else to do but listen. People desperate for something to do."

"You mean these, ah, soap box orators are organized? They've got some kind of definite bug that . . ."

Hopkins held up a thin hand. "No. No, not yet. But that is just a matter of time. Sooner or later, one of them will come up with an idea that appeals to the mob. He'll attract followers, other street corner harrangers. The condition the country is in now, almost any really popular idea would sweep in like wildlife. A new religion. More likely a new political theory, however far right or left."

"Oh," Ed said. He could understand the workings of politician Dwight Hopkins' mind now. The administration had definite irons in the fire. Tubber's efforts might threaten the political climate. However, Ed still didn't see where he came in.

They weren't long in enlightening him.

Hopkins said, "Mr. Wonder, time is running out on us. We must have some action. It will be necessary to contact this Ezekiel Joshua Tubber."

"I think it's a good idea. Go ahead. Maybe you can appeal to his patriotism, or something. No, come to think of it, patriotism is out. He thinks the country is being run by a bunch of idiots. He's against the welfare state."

"Little Ed," Hopkins said smoothly. "I am afraid that it is going to have to be you who sees Tubber.

I can think of no one else to whom we can intrust the assignment."

"Oh, no you don't. Listen, why not send a few of the F.B.I. boys? Or maybe the C.I.A. They're *used* to trouble. I hate it."

Hopkins was at his most persuasive. "If Tubber is at the root of our troubles, sending police officers of any description could well prove disastrous. If he is not, then it could only make us look foolish. No, you are the one. He knows you, his daughter is evidently attracted to you."

"But you need me to handle my department, Project Tubber," Ed said desperately.

"Mr. De Kemp can handle matters until your return."

"I'm expendable, huh?" Ed said bitterly.

"If you must put it in that manner, yes," Hopkins told him.

"Well, you're just going to get another patsy. I'm afraid to get within miles of that old kook," Ed Wonder told them definitely.

XXI

They had given him a highly detailed map of the Catskill area in which was located Elysium. It wasn't too far from the Ashokan reservoir, nor from the once artist colony of Woodstock.

Ed passed through that town, on to Bearsville and beyond to a hamlet called Shady. From there a dirt side road led off some miles to the community of Elysium. There were a couple of signs along the way. Ed Wonder had never had the little

Volkshover over a dirt road before. However, beyond churning up quite a screen of dust left behind, there seemed no special effect.

He passed a small cottage, laid back away from the road. Perhaps cabin would be the better term. There was an extensive garden of both flowers and vegetables around it. Ed Wonder drove on, passing another, somewhat similar abode, though not an exact duplicate. In the back of his mind he identified the places as summer houses; someone who wanted to get away from it all, get back to nature during the warm months. The idea didn't exactly appeal to him, although, come to think of it, there were desirable aspects to this sort of . . .

Then it came to him as another cottage appeared to the left.

This was Elysium.

There were little side roads going off in this direction and that. Obviously, to other habitations.

His face twisted. People lived here *all year around*? Stuck off here away from, well, from civilization?

It came to him that there were neither TV nor radio antennas. Nor, for that matter, telephone wires. It came to him, as a shock, that there couldn't under the circumstances be any community distribution center. These people must actually cook their own food.

He let the Volkshover settle to the ground so that he could consider other aspects. Three of the cottages were in view now. And there wasn't a hovercar in sight, aside from his own.

"You'd go batty," he muttered.

There were some youngsters in a grove off a way, playing in the trees. They were scampering around the branches like a tribe of monkeys. Ed Wonder's first response was to wonder why their parents were allowing them to risk their necks so obviously. Say what you wanted to against TV but at least it kept the kids off the streets and out of dangerous play. A kid could get himself in some risky situations if allowed to horse around like these. Then something else came to him. Perhaps children should be exposed to a certain degree of danger in their play. Perhaps a broken arm or so, whilst going through the process of growing up, came under the head of education and had value in the way of experience.

He was going to go over to the youngsters to ask directions, but then, in the distance saw someone he recognized. He dropped the lift lever and at slow speed proceeded in her direction. It was one of Tubber's followers. One of the women who had acted as receptionist at the tent entrance there in Kingsburg, the first night Ed and Helen had come afoul of Ezekiel Joshua Tubber.

Ed pulled up aside her and said, "Ah . . . loved one . . ."

She stopped and frowned, evidently surprised to see a hovercar on the streets — if they could be called streets — of Elysium. She obviously didn't recognize him. She said hesitantly, "Good afternoon, loved one. Could I be of assistance?"

Ed climbed out of the beetle and said, "You don't remember me. I've

attended a couple of the meetings of, ah, the Speaker of the Word." He should have planned this out better. The fact of the matter was, he hadn't a clue to what he was going to find here and was playing it by ear.

He said, "I thought I'd come and see what Elysium was like."

Her face lost stiffness. "You are a pilgrim?"

"Well, maybe not exactly. I'd just like to know more about it." He fell in beside her, leaving the car where it was. Parking was no problem in Elysium. "I'm not keeping you from anything, am I?"

"Oh, no." She continued to walk along. "I'm only delivering some of my things to the printer."

"Printer?"

"That building there. It's our print shop."

Ed Wonder looked at that building there, which they were approaching. It looked little different from the cottages. "You mean you print . . ."

"Just about everything." She didn't look quite as grim as he'd remembered her at the tent meeting in Kingsburg. Come to think of it, Ed decided, he had *expected* her to look grim at the tent meeting. A dedicated Holy Roller, or something, all set to froth at the mouth against dancing, drink, and card playing."

He said, even as they approached the door. "You mean books?" Ed Wonder's conception of the printing of books involved acres of Rube Goldberg printing presses, entirely automated, with huge rolls of paper unwinding at flashing speed at one

end and finished volumes flowing out, to be wrapped and boxed, again automatically, at the other. All at the rate of thousands per hour, if not per minute. This whole building couldn't have been more than thirty by forty feet, at most.

"Books, pamphlets, even a little weekly newspaper we send out to pilgrims throughout the nation who are not yet quite ready to join us in Elysium." She greeted one of the two men who occupied the print shop. "Kelly, I've finally got the last two verses."

Kelly had been standing before what Ed vaguely recognized to be a primitive type of printing press. With his left leg he was stomping up and down on a treadle, somewhat similar to the powering of the early sewing machine. At the same time he was picking up sheets of paper with his right hand, inserting them deftly into the moving press removing them just as deftly with his left hand, repeating the process over and over again.

Kelly said. "Hi, Martha. Good. Norm can set them up."

Ed was watching in fascination. If the other got his hand caught between that type and . . .

Kelly grinned at him. "Never saw a platen press before?"

"Well, no," Ed said.

Martha said, "Kelly, this is a new pilgrim. He's been to some of Josh's meetings."

They exchanged banalities. For a time, Ed watched in complete astonishment. He realized he couldn't have been more surprised

If he had come into a room where women were carding wool and then utilizing spinning wheels to make thread. Had he known it, that was going to come later.

While Martha and Kelly got into some technical discussion about the book they were evidently in the process of producing, Ed wandered over to where the room's other occupant was working.

This worthy looked up and grinned a welcome. "Name's Haer, loved one," he said. "Norm Haer."

"Ed," Ed told him. "Ed Wonder. What in the devil are you doing?"

Haer grinned again. "Setting body type. This is a California type box. Ten point, Goudy Old Style."

"I thought you set type on a machine that looks something like a typewriter."

Haer laughed. "That was the old-fashioned way. Here in Elysium we set it by hand." His hand darted, flicked out, flicked back again. The lines of type in his hand-held tray were slowly growing.

Ed said, a faint exasperation in his voice, "Look, what's the point? Ben Franklin used to print like this but since then we've dreamed up a few improvements."

The type setter's fingers never stopped their flying. He was evidently the sort who remained in almost perpetual good humor. At least, thus far, his face had never lost its smile.

"There's several angles," he told Ed. "One, there's a lot of satisfaction in turning out a finished product with your own hands. Preferably a superior product. Something

Nefertiti



went out of the production of commodities when a shoemaker no longer makes footwear starting out with leather and winding up with a finished pair of shoes, but instead stands before a gigantic machine, which he doesn't understand, watching a few gauges and periodically throwing a switch, or pushing a button, for four or five hours a day."

Ed said, "Oh, great, but that first shoemaker of yours turned out maybe one pair of shoes a day, and the second one ten or twenty thousand."

The printer grinned. "That's right. But the second one has ulcers, hates his wife and is an incipient alcoholic."

Ed Wonder said suddenly. "What did you do before you got this job setting type for Tubber? You don't sound like some uneducated, small time . . ." He let the sentence dribble away. It didn't sound very diplomatic.

Norm Haer was laughing. "I'm not setting type for Tubber, but for Elysium. I used to be managing director of World-Wide Printing Corporation. We had offices in Ultra-New York, Neuve Los Angeles, London, Paris and Peking."

Ed had experienced the ruggedness of trying to climb the pyramid in the Welfare State. When only a third of the nation's potential working force was needed in production, the competition could get fierce. He said, in compassion. "Got all the way to the top but then they bounced you, eh?"

"Not exactly," Haer grinned. "I was too big a stockholder for that. I happened to read one of Josh

Tubber's pamphlets one day. So the next day I got hold of everything of his I could locate. And the next week I told World-Wide what they could do with their job and came here to Elysium to help set up this shop."

The man was obviously half way around the corner, good humor or not. Ed left that line of thought. "What are you working on now?" he said.

"A limited edition of Martha Kent's latest verse."

"Martha Kent?" Ed Wonder knew the name. Poetry wasn't his forte but American Nobel Prize winners weren't so common that you didn't hear of them. "You mean she's given you permission to bring out a book of hers!"

"That's not the way I'd put it," Haer grinned. "It's more a matter of Martha bringing it out herself."

"Martha!" Ed blurted. His eyes went accusingly over to where the woman with whom he had entered the shop was talking with Kelly as he ran his foot operated platen press. "You mean that's Martha Kent?"

"As ever was," Haer chuckled.

Ed Wonder muttered some sort of good-by and rejoined the other two. He said, in accusation, "You're Martha Kent."

"That's right, loved one," she smiled.

"Look," Ed demanded. "I don't want to appear dense, but why're you bringing out a book of your latest poems through a little one-horse outfit like this?"

"Never let Josh Tubber know I said this," she said, and there was a quick elfin quality in her face, "but to make money."

"Make money!" Ed said in disgust.

Kelly ran out of paper, stopped peddling, wiped his hands on his apron and walked to a nearby pile of books. He took one up and returned with it to the newcomer. He handed it to Ed without speaking.

Ed turned it over in his hands. It was bound in leather. Somehow it was different. He opened it and fingered through the pages. The paper was heavy and had sort of an antique finish. He had never heard of the author. He had a strange feeling that he was handling a work of art.

The other two watched him, a disconcerting amusement in their air.

To say something, Ed said, "I've never seen paper like this, where did you get it?"

"We made it," Kelly said.

Ed closed his eyes for a moment. He opened them and said, "What do you need money for? You evidently make everything." He pointed a finger accusingly at Martha Kent's dress. "That's homespun, isn't it?"

"Yes. But obviously we can't do completely without money, even in Elysium. For instance, we need postage to mail our publications. Sometimes we need medicines. We have to buy salt. Oh, you'd be surprised."

"Look," Ed said plaintively. "You Martha Kent, write a book that's potentially a best seller. You bring it in here and put out a limited edition by setting it by hand, printing it

yourself by footpower on paper you made yourself. So how many copies do you print. A thousand?"

"Two hundred," Martha said.

"So you sell them for how much apiece? A hundred dollars?"

"Two dollars," Martha said.

Ed closed his eyes again, this time in pure anguish. He said, "Two dollars for a book like this? I'm no biblomaniac, but a first edition, limited edition, hand-produced Martha Kent would be all but priceless. But aside from that, if you simply put the manuscript in the hands of any major publisher, you'd realize a small fortune."

Kelly said reasonably, "You don't understand. We don't need a small fortune. It's just that right at the present Elysium could use about four hundred dollars, for medicine and . . ."

Martha interrupted hurriedly to say, "But don't let Josh Tubber know our motivation. Josh isn't always very practical. He'd be indignant if he knew we were so crass as to publish this work for the sake of raising money."

Ed had given up. He said bitterly, "What would he do with them? Give them away?"

Martha and Kelly said in unison, as though nothing was more reasonable, "Yes."

Ed said, "I'm going outside to get some air."

He walked back in the direction of the Volkshover, refusing to allow himself to start tearing his hair.

All right, damn it, give them every benefit of the doubt. This little com-

munity set in the hills and woods of the Catskills, had its virtues. Good clean air. Tremendous scenery — there in the background was Overlook Mountain. Good place to raise children, possibly. Although, the devil knows where they'd get their schooling. He pulled himself up on that one. If Tubber held an academecian's degree and Martha Kent was one of his followers, then Ed suspected there were others capable of teaching school, in some sort of little red schoolhouse tradition.

All right. So it had its qualities, although it might be another thing in the winter. His eyes went around to two or three of the cottages. They all had chimneys. Holy smokes, these people actually burnt wood. Logs, evidently, that they cut themselves. Not even oil heat in the winter! How stoneage could you get?

Come to think of it, though, it was probably beautiful here in the winter. Especially when the snow was newly fallen. Ed Wonder made a custom, when there'd been a heavy new snowfall, of driving out from Kingsburg into the country, just to look at the snow in the early morning, on the tree limbs, on the fields — before man and sun destroyed it. Of course, he never left the main roads. This would be different. It occurred to him that a really heavy snowfall would snow them in here, so that they couldn't get down to even Woodstock for supplies.

He drew himself up again. They didn't have to get down to Woodstock, or anywhere else, for supplies. They grew their own supplies, evidently.

But how about medical care, in case one of them fell ill while they were snowed in? He didn't know, possibly some of them had medical training. They seemed to have everything else.

All right, given all their qualities. They were still as kooky as a bunch of Alice in Wonderland hatters. Getting themselves off here, living like a bunch of pioneers. No TV, no radio.

He wondered how often the kids had been allowed to go into town to the movies. And then decided probably never. Perhaps he didn't know Ezekiel Joshua Tubber too well, but it was obvious that the prophet didn't exactly hold with modern films, with their endless violence, crime and what Tubber probably thought were perverted values.

What in the devil did they *do* with themselves?

And that kooky conversation he'd just had with Martha Kent, Kelly the printer, and Haer the typesetter. There must have been months put into that book of hers. And what was to be the product of all that work? Four hundred dollars. And how did they arrive at that sum? They'd needed that exact amount for something the colony was in want of. Oh, great. What was wrong with eight hundred dollars, giving them a reserve of half for future colony needs? Hadn't that even occurred to anyone? Hadn't Professor McCord told Ed that Tubber had a degree in economics? What did they teach in the Harvard School of Economics these days?

At that point, he spotted somebody else he knew, disappearing into one of the cottages. It was Nefertiti Tubber.

He called to her, but evidently wasn't heard.

Ed Wonder took a deep breath, straightened his spine, ran his index finger around the inside of his collar and performed one of the bravest acts of his life. He marched up to the cottage and knocked on the door.

Her voice called, "Come in, loved one."

He opened the door and stood there a moment. From time to time, in his reading, he had come upon the term quaking. Characters would quake. He had never quite a clear picture of what quaking amounted to. Now he knew. Ed Wonder was quaking.

However, unless the Speaker of the Word was off in one of the two smaller rooms which the cottage seemed to boast, besides the larger one which opened off the street, Nefertiti was alone. There was nothing in Nefertiti Tubber to quake about. Ed stopped quaking.

She said, "Why, Edward. Loved One. You've come to me."

It wasn't exactly the way the followers of Tubber usually pronounced loved one.

Ed closed the door behind him.

She came closer, her arms at her sides, and stood before him.

It was as simple as that. He didn't have to think about it at all. If he had, maybe he wouldn't have. Wouldn't have done what came so naturally.

He took her very firmly and kissed her very truly, as old Hemingway used to put it, smack on the kisser. She had a kisser built to order for kissing. But evidently hadn't put it to much practice.

Nefertiti Tubber was evidently highly in favor of rectifying that shortcoming. She didn't stir. Her face continued to be held up to his, her eyes, open, not closed, were dreaming.

So he kissed her again.

After a time he remembered to say, nervously, "Ah, . . . where's your father, ah . . . honey?"

She stirred, as though impatient of talk. "He's gone into Woodstock to meditate over a few glasses of beer."

Ed closed his eyes in quick appeal to his guardian angels, if any. "Ezekiel Joshua Tubber on the town having a few brews?"

"Why not?" She took him by the hand and led him to the couch. It was, he noted, absently, obviously of hand construction, even the padding, the bolsters and pillows. Somebody had put a great deal of work into this piece of furniture. She seated herself comfortably beside him.

Ed said, "I don't know. I just kind of thought your father would be against drinking. In fact, any day I expected my autobar to start making with buttermilk, or something, when I dialed a quick one."

It came to him that this was an opportunity he should be taking advantage of, instead of spending it necking. No matter how desperately Nefertiti Tubber might be in need of practice.

He said, "Look Nefertiti . . . by the way, did you know the original bearer of your name was the most beautiful woman in antiquity?"

"No," she sighed. She snuggled his arm more tightly around her waist. "Tell me more."

He said, "I suppose your father gave you the name because Nefer-titi's husband, Akhnaten, was the first pharaoh to teach that there was only one god." Ed Wonder had picked up that bit of knowledge from Professor Varley Dee on the Far Out Hour one night. A religious twitch guest had been of the belief that the Hebrews had been the first to teach monotheism.

"Well, no," she said. "Actually, it was a press agent. My real name is Sue."

"Press agent!"

"Ummm," she said distantly, as though impatient of talk. "Back when I was a stripper."

"Back when you were *WHAT?*"

"Doing a strip tease act, on the Borscht Circuit."

Ed Wonder sat bolt upright. His eyes goggled her. "Listen," he said desperately. "I'm hearing things wrong. I could have sworn you said you were a strip teaser on the Borscht Circuit."

"Ummm. Put your arm around me again, Edward. That was before my father rescued me and brought me to Elysium."

Ed knew that the best possible thing he could do was change the subject. Change it to anything. But he couldn't. Any more than he could have kept from wriggling a

loose tooth with his tongue, no matter what the pain.

"You mean to tell me that your father allowed you to do a strip tease act, on the Borscht Circuit or anywhere else?"

"Oh, that was before he was my father."

Ed Wonder closed his eyes, resigned to anything.

Nefertiti summed it up quickly. "I was an orphan and, well, sort of kid-crazy to get into show business. So I ran away from the orphanage and lied about my age. I was fifteen. And, well, finally I got a job with a troupe doing real live shows. I was booked as Nefertiti the Modest, the girl who blushes all over. But we didn't do so well, because who wants to see real live shows any more when all the truly good acts are on TV? Anyway, to make it short . . ."

"The shorter the better," Ed muttered.

". . . father rescued me." Her tone went apologetic. "It was the first time I heard him speak in wrath. Then he brought me here, and sort of adopted me."

Ed didn't ask what *sort of adopted* meant. He said, "The first time you heard him speak in wrath? What did he do?"

Nefertiti said uncomfortably, "Uhh, he kind of burned the nightclub building down. Sort of, uhh, like a bolt of lightning kind of."

He brought his twirling mind back to approximate place and present, with a great effort. He simply had to use this opportunity to advantage. He couldn't sit here and blabber as

these curves were thrown at him.

"Look," he said firmly, disengaging his hand from hers and half turning to stare at her levelly, seriously. "I didn't come here just to see you."

"You *didn't*?" There was hurt in her face.

"Well, not entirely," he said hurriedly. "I've been given a very responsible job by the government, Nefertiti. Very responsible. And part of my duty is to find out . . . well, to find out more about your father and this movement of his."

"Oh, wonderful. Then you'll have to spend a great deal of time here in Elysium."

He kept himself from answering with an emphatic negative to that and said, "Now, to start at beginnings. I'm a little confused about this new religion your father is trying to spread."

"But about what, Edward? It's perfectly simple. Father says all great religions are quite simple, at least before they are corrupted."

"Well, for instance, who is this All-Mother you're always talking about?"

"Why, you are, Edward."

XXII

After a long moment, Ed Wonder opened his eyes again. He said, slowly, "I keep getting the impression that every other sentence is being left out of this conversation. What in the name of Mountain-Moving Mohammed are you talking about?"

"The All-Mother. You're the All-

Mother, I'm the All-Mother, that little bird singing out there, it's the All-Mother. The All-Mother is everything. The All-Mother is life. That's the way father explains it."

"You mean, something like Mother Nature?" Ed said with a certain relief.

"Exactly like Mother Nature. The All-Mother is transcendent. We pilgrims on the path to Elysium aren't so primitive as to believe in a, well, *god*. Not a personal, individual god. If we must use such terms, and evidently we do in order to spread our message, then we use All-Mothers as a symbol of all life. Father says that woman was man's earliest symbol when searching for spiritual values. The Triple Goddess, the White Goddess was all but universal in the first civilizations. And even down into modern times. Mary has almost been deified by Christians. And note that even atheists refer to *Mother Nature*, rather than *Father Nature*. Father says that those religions that have degraded women, such as the Moslems, are contemptible and invariably reactionary."

"Oh," Ed Wonder said. He knuckled his chin ruefully. "I suppose you people aren't quite as kooky as I first had figured out."

Nefertiti Tubber hadn't heard that. Her face was twisted thoughtfully. "We could probably have that cottage, up next to the laboratory," she said.

The import of that didn't get through to him at first. "Laboratory?" he said.

"Ummm, where Doctor Wetzler is working on his cure."

"Wetzler! You don't mean . . ."

"Ummm, Felix Wetzler."

"You mean Felix Wetzler is up here in this backwoods . . . that is, in this little community?"

"Of course. They had him working on some sort of pills to give women curly hair, or something. So he gave up in disgust and came here."

"Felix Wetzler, working up here. Balls of fire, he's the most famous . . . What kind of cure is he working on?"

"For death. We could have the cottage right next to him. It will be finished in a day or two. And . . ."

Ed Wonder shot quickly to his feet. It had got through to him now. "Look," he said hurriedly. "Like I told you, I've got this important government assignment. I have to see your father."

She was unhappy, but she stood too. "When will you be back, Ed?"

"Well, I don't know. You know how it is. The government. I'm working directly under Dwight Hopkins himself. Duty first. All that sort of kookery." He began edging toward the door.

She followed him. At the door she held up her face again, for his kiss. "Edward, do you know when I fell in love with you?"

"Well, no," he said hurriedly. "I wouldn't know when that happened."

"When I heard them calling you Little Ed. You don't like to be called Little Ed. But they all call you that. They don't care that you hate it, they don't even know you do."

He looked at her. Suddenly ev-

erything was different. He said, "You never called me that."

"No."

He bent down and kissed her again. She didn't seem to need practice as much as he had thought earlier. He tried again, just to be sure. She hardly needed practice at all.

Ed said, "I'll be back."

"Of course."

He found Ezekiel Joshua Tubber seated at a table in a corner of Dixon's Bar.

The drive down from Elysium, through Shady and Bearsville, had been in a state of mental confusion. But now that he considered it, he had never been in a state other than one of confusion every time he came up against Tubber and his movement. The man had started out seemingly a Bible-belt itinerant revivalist, and wound up with a academecian's degree in political economy from Harvard. His daughter had started off a simple, slightly plumpish girl in gingham print dress who blushed, and had wound up an ex-strip teaser and only a sort-of-adopted member of the Tubber family. The new religion had started off just one more sect of cranks, and now was revealed to have among its followers Nobel Prize winner Martha Kent, and ultratop research biochemist Felix Wetzler.

However, he was beginning to lose his fear of Ezekiel Joshua Tubber. The Lincolnesque prophet — if that was the term — was beginning to take on aspects of reality.

Ed Wonder had brought himself up sharp at that point. Reality, his

neck. There was no reality in a situation that embraced the laying on of world-wide hexes, just because an elderly twitch got himself into a tizzy against this or that aspect of modern society, from time to time.

He spotted the Tubber horse and wagon, pulled up before a smallish auto-bar which read simply *Dixon's*. Ed Wonder began fumbling in his pockets for a coin for the parking meter; there being an empty place right next to the wagon. However, at this point he saw a cop coming along the street toward him and scowling unbelievably at each meter in its turn.

When he came abreast of Ed's Volkshover, Ed said, "What seems to be the matter, officer?"

The other looked at him unbelievably. "These here parking meters. Something crazy's happened."

Ed Wonder could see it coming, but he couldn't help saying, "What?"

"There's no slot for the coin to go in. Damn it, there's gotta be a slot. There was a slot yesterday. There's always been a slot for the coins to go in. This is crazy. You'd think they were hexed, or something."

"Yeah," Ed said wearily. He climbed out of the hovercar and made his way toward *Dixon's*.

There was a blast of juke-box music emanating from the auto-bar. Ed Wonder set his shoulder against it, and pushed his way in. For some reason, since the elimination of radio and TV, everybody seemed to have tuned up their juke boxes to the cyclonic point.

Tubber was seated in a corner, a

half-full glass of beer before him. In spite of the fact that the place was packed, his table was empty except for himself. He looked up at Ed's approach and smiled gentle welcome.

"Ah, loved one. Will you share a glass of beer with me?"

Ed steeled himself and took a chair. He said bravely, "Sure I'll have a glass of beer. What surprises me is that you're having one. I thought all you reformers were on the blue-nosed side. How come the pilgrims on the path to Elysium aren't morally opposed to the demon alcohol?"

Tubber chuckled again. At least the old boy seemed to be in a good humor. He raised his voice over the blast of the juke-box. "I see you are beginning to pick up some of our symbolic terminology. But why should we be opposed to the blessing of alcohol? It is one of the All-Mother's earliest gifts to mankind. So far back as we can trace, in history and pre-history, man was aware of alcoholic beverages and enjoyed them." He held up his glass of beer. "We have written records of the brewing of beer going back some 5,000 years B.C. in Mesopotamia. By the way, were you aware of the fact that when the Bible mentions wine, in its earlier books, it is referring to barley wine, which is, of course, actually beer. Beer is a much older beverage than wine."

"No, I didn't know it," Ed said. He dialed himself a Manhattan, feeling a need for some more substantial backing than beer would promote.

"But most religions point out that alcohol can be a disaster. The Mohammedians don't allow it at all."

Tubber shrugged pleasantly, after darting a disapproving glance over at the juke box which was now rendering a Rock'n'Swing version of *Silent Night*. He all but yelled, to get his voice above the alleged music. "Anything can be a disaster if overdone. You can drink enough water to kill yourself. What in the name of the All-Mother is that piece they're playing? It seems, very vaguely, to be familiar."

Ed told him.

Tubber looked disbelief. "That's *Stille Nacht*? Dear one, you are jesting?"

Ed figured they'd gone through enough preliminary pleasantries. He said, "Look here, Mr. Tubber . . ."

Tubber bent an eye on him.

". . . uh, that is, Ezekiel. I've been assigned to contact you and try to come to some understanding on these developments of the past few weeks. I don't suppose there's any need of telling you that the world is going to pot by the minute. There are riots going on in half the larger cities of the world. People are going batty for lack of something to do. No TV, no radio, no movies. Not even comics or fiction to read."

"Surely you are mistaken. Why, the world's classics haven't been affected."

"The world's classics! Who the devil reads classics? The people want something they can read without thinking! After a hard day, people can't concentrate."

"A hard day?" Tubber said mildly.

"Well, you know what I mean."

The bearded religious leader said gently, "That is the difficulty, dear one. The All-Mother designed man to put in a hard day, as you call it. A full day. A productive day. Not necessarily a physically hard day, of course. Mental endeavor is just as important as physical."

"Just as important," Ed said. "More important. Anybody knows that."

"No," Tubber said mildly. "The hand is as important as the brain."

"Yeah? Without the brain where would man be?"

"And where without the hand?"

"Some of the monkeys have hands and haven't got very far."

"And such animals as dolphins and whales have brains and haven't gotten very far either. They are both needed, dear one. The one as badly as the other."

Ed said, "We're getting away from the point. The point is that the world's on the point of collapse because of this, these . . . well, whatever it is you do."

Tubber nodded and dialed himself another beer. He scowled at the juke box which was now roaring out a hill billy lament, complete with vocal twang. The hill billy twang, it came to Ed Wonder, intensified as each decade went by. He wondered if a hundred years ago there had actually been a twang in Ozark speech.

"Fine," Tubber said.

"What?" Ed asked. The jukebox had distracted him.

"You said the world is on the point of collapse." The Speaker of the Word nodded satisfaction. "After the collapse, perhaps all will take up the path to Elysium."

Ed finished his Manhattan and dialed another. "Now look," he said aggressively, "I've been checking on some of your background. You're a well-educated man. You've been around. In short, you're not stupid."

"Thank you, Edward," Tubber said. He scowled again over at the juke box. They had to shout to make themselves heard.

"All right. Now suppose everything you say about the Welfare State is correct. Let's concede that. All right. I've just been over to Elysium. I've seen how you live there. Okay. It's fine for some people. Some people must love it. Nice and quiet. Good place to write poetry, or do handicrafts or scientific experiments, maybe. But, holy smoke, do you expect *everybody* to want to live like that. You've got this tiny community of a few dozen households. The whole world can't join up. It's a small basis thing. You keep talking about taking the road to Elysium. Suppose everybody did, how would you pack four or five billion people into that little Elysium of yours?"

Ezekiel Joshua Tubber had heard him out. Now he chuckled. Broke off his humor to scowl still once again at the source of music. The juke box never went silent. There was always someone to drop in another coin.

"You fail to understand the word,

dear one. Our term Elysium has a double meaning. Obviously, we do not expect the whole world to join our little community. It is but an example for others to heed. We are but indicating that it is possible to lead full, meaningful lives without resort to the endless products of present mechanical society. Perhaps we go to the extreme, for the sake of emphasis. I utilize horse and wagon to illustrate that five hundred horsepower hovercars, gulping up petroleum products at a disastrous rate for the sake of obtaining a speed of two hundred miles, are redundant. There are many examples to illustrate that too often we utilize complicated machinery simply for machinery's sake."

Ed shouted, "I don't get that."

Tubber said, "Take the abacus. For years we have been sneering at the Japanese, Chinese and Russians because they are so backward as to use the abacus in their businesses, their banks and so forth, instead of our electrical adding machines. However, the fact is that the abacus is more efficient and actually faster than the usual electric adding machine, and most certainly less apt to break down." The old boy glowered in the direction of the juke box. "Verily, that device is an abomination."

Ed said, in exasperation, "But we can't scrap all the mechanical devices we've invented over the past couple of hundred years."

"Nor would I wish to, loved one. It is quite true that you can't un-invent an invention any more than you can unscramble scrambled eggs.

However, the world has gone far beyond the point of intelligent usage of these discoveries."

The old man thought a moment. "Let me give you a hypothetical case. Suppose a high pressure entrepreneur conceives of something that to this point no one had dreamed of wanting. Let us take something out of the clear sky. Let us say an electric martini stirrer."

"It's been done," Ed said.

Tubber stared at him. "Surely you jest."

"No I read about it. Back in the early 1960s. About the same time they came out with electric toothbrushes."

"It's still as good an example as any," Tubber sighed. "Very well, our idea man hires some highly trained engineers, some of our best technicians, to design the electric martini stirrer. They succeed. He then turns to industry and orders a large number of devices. Industry tools up, using a great many competent, highly trained men, and a good deal of valuable materials. Finally, the martini stirrers are finished. Our entrepreneur must now market them. He turns to Madison Avenue and invests in advertising and public relations. To this point, nobody in the United Welfare States of America had the vaguest desire for such a device, but they are soon educated. Advertising through every medium; campaigns conceived of by some of the most clever brains our country can produce. And side by side go the public relations men. It is mentioned in some columnist's blather that Mary Malone, the TV star, is

so pleased with her martini stirrer that she has begun having cocktails before lunch as well as before dinner. It is understood the Queen's bartender invariably uses one. It is dropped that Think Watson the Fourth of I. B. M. - Remington wouldn't dream of drinking a martini mixed otherwise."

"I get your drift," Ed said. "So everybody buys one. But what harm's done? It keeps the country going."

"It keeps the modern economy going is quite true. But at what a cost! Our best brains are utilized contriving such nonsense and then selling it. On top of that, we are using up our resources to the point that already we are a have-not nation. We must import our raw materials. Our mountains of iron, our seas of oil, our once seemingly endless natural resources have been flushed down the sewers of this throw-away economy. On top of it all, what do you suppose this sort of thing is doing, ultimately, to the intellects of our people? How can a people maintain their collective dignity, integrity and sense of fitness if they can be so easily coerced into desires for nonsense things, status symbols, nothing things, largely because the next door neighbor has one, or some third rate cinema performer does?"

Ed dialed another drink desperately, "All right, so maybe electric martini stirrers are on the redundant side. But it's what people *want*."

"That's what people are *taught* to want. We must reverse ourselves.

We have solved the problems of production of abundance, now man should settle down and take stock of himself, work out his path to his destiny, his Elysium. The overwhelming majority of our scientists are working either on methods of destruction, or the creation of new products which our people do not actually need or want. Instead, they should be working upon the curing of man's ills, delving into the secrets of the All-Mother, plumbing the ocean's depths, reaching out to the stars."

"All right, but you've seen that people simply aren't interested in your ideas. They want their TV, their radio, their movies back. They aren't interested in your path to Elysium. You admit that, you've even given up your lectures."

"In a weak moment," Tubber nodded. "This very day I plan to resume my efforts. Nefertiti and I will depart for the city of Oneonta where my tent will again . . ." He broke off, to glower once more at the thundering juke box which was blasting out a Rock'n'Swing revival of *She'll Be Coming 'Round the Mountain*. "In the name of the All-Mother, how can anyone wish to listen to that?"

Ed shouted reasonably. "It's your own fault. You've taken away TV, radio and movies. People aren't used to silence. They want music."

"Dost thou call *that* music!" The infinitely sad face of the aged Speaker of the Word was beginning to change in a manner that came back to Ed Wonder in a growing dismay.

"Now look," Ed said hurriedly.

"It's a natural reaction. People are packing into restaurants, bars, dance halls. Any place where they can get a little entertainment. The juke box manufacturers are running on a three-shift basis. Records are being turned out wholesale, as fast as they can press them . . ." He cut himself off sharply. It wasn't the right thing to say.

Ezekiel Joshua Tubber, Speaker of the Word, was swelling visibly.

Ed Wonder stared at him numbly. It came to him that Moses must have looked something like this when he came down from the mountain with his Ten Commandments and found the Hebrews worshipping the Golden Calf.

"Ah, they do! Then verily do I curse this abomination! This destruction of the peace so that man cannot hear himself think! Verily do I say, that they who wish music shalt have music!"

The volume of the multi-colored music machine fell off sharply, and the six white horses that were coming 'round the mountain suddenly dissolved into, ". . . we'll sing as we go marching on . . ."

Ed Wonder lurched to his feet. He felt a sudden, dominating urge to get out of here. He muttered something to Ezekiel Joshua Tubber in the way of farewell, and hustled toward the door.

As he escaped, the last he saw of the hex-wielding prophet Tubber was still glaring at the juke box.

Somebody standing at the bar growled, "Who in the hell played that one?"

The record player swung into the

chorus, "Glory, Glory Hallelujah. Glory, Glory Hallelujah . . ."

XXIII

Ed Wonder tooled the little Volkshover down the freeway toward Ultra-New York.

So great, damn it. He'd warned Hopkins. He seemed to act as a catalyst around Tubber. He couldn't get within talking distance of the Speaker of the Word without a new hex resulting. Not that the old boy wasn't up to getting wrathed up about something on his own. Ed wondered if the hex on the parking meters applied only to those in Woodstock, or if the phenomenon was world-wide. Evidently, Tubber's mysterious power didn't have to be universal in scope. When he'd broken the guitar strings, it hadn't been all of the guitar strings in the world, evidently, but only the ones on the individual guitar. And from what Nefertiti had suggested, when he had burned down the roadhouse where she had been performing, the lightning had hit only the one place, not every roadhouse on earth.

Ed muttered, "Thank the All-Mother for small favors."

He stopped along the way for a sandwich and cup of coffee, at a trucker's stop.

Half a dozen customers were gathered around the establishment's juke box, staring at it in bewilderment. The record player was grinding out, "Mine eyes have seen the glory of the coming of the Lord. He is tramping out the vintage where . . ."

One of the truckers said, "Jesus,

no matter what I punch it comes out, *Hark the Herald Angels Sing.*"

One of the others looked at him in disgust. "What'd'ya talking about. That's not *Hark the Herald Angels Sing*. That's *Little Town of Bethlehem.*"

Somebody else chimed, "Both you guys are kooky. I remember that song from when I was a kid. It's *In the Sweet Bye and Bye.*"

A Negro shook his head at them. "Mother, but you folks just ain't up on spirituals. That there's *Go Down Moses*. No matter what you punch on this here crazy machine, it comes out *Go Down Moses.*"

Ed Wonder decided to forget about the sandwich. So far as he was concerned, he was still hearing, and over and over again, all about the glory of the coming of the Lord, and glory, glory Hallelujah.

He left the place and got back into the Volkshover. He wondered how long it would be before everyone gave up and stopped sticking coins in juke boxes.

He set out again for Manhattan and the New Woolworth building. Okay, he'd warned them. All he could say was it was lucky old Tubber liked an occasional beer himself, otherwise probably every bottle of booze in the country would have been turned into vintage orange pop, just as soon as the Speaker of the Word got around to thinking about all the people who were spending their time in bars, rather than listening to the need for hiking down the path to Elysium like good pilgrims.

At the New Woolworth Building,



his identification got him past the preliminary guards and up the five—only it was now ten—floors devoted to Dwight Hopkins' emergency commission.

He found Helen Fontaine and Buzz De Kemp in his own office, bent over a portable phonograph and eyeing it accusingly as though the device had malevolently betrayed them.

When Ed entered, Buzz pulled his stogie from his mouth and said, "You'll never believe this, but . . ."

"I know, I know," Ed Wonder growled. "What is it you hear?"

Helen said, "It's fantastic. For me, it comes out *I Come to the Garden Alone*."

"No, listen," Buzz insisted. "Listen to those words. 'If you follow

Me, I will make you fishers of men, if you'll follow me.' Clear as a bell."

It still sounded like Glory, Glory Hallelujah to Ed Wonder. He slumped down in the chair behind his desk.

Buzz took the record from the machine and put on another one. "But listen to this. The other was supposedly a Rock'n'Swing piece, but this label reads the first movement of the Peer Gynt Suite." He flicked the switch on. The first movement of the Peer Gynt Suite came out *The Morning*, as it was supposed to do.

Ed was interested. "It's selective again."

They looked at him.

Buzz said accusingly, "What's selective again?"

"The hex."

Helen walked over to the newly installed auto-bar. "Oh, *Mother*, I need a drink. What do you mean, hex?"

"Make mine a Moscow Mule," Buzz said.

"Whiskey," Ed said. "A double."

They lifted their glasses in unison, but the other two were staring accusingly at Ed over the rims of theirs.

Ed said defensively, "We were talking in a bar and they had the juke box turned up to full volume and, well, he had to shout to be heard."

"Oh, fine," Buzz said. "Why didn't you get him out of there?"

Helen said wearily, "So he got wrathful about juke boxes. Heavens to Betsy, can't anybody ever turn him off before he gets mad? He's not only fouled up juke boxes but all popular records, and I imagine tapes."

Ed said, "I never did like juke boxes anyway. He also evidently didn't have a dime to stick in a parking meter. So . . ."

"Hey, now we're getting somewhere," Buzz said. "Don't tell me he laid a hex on parking meters."

"There's no slot in them, any more," Ed told him. "Listen, did anything important happen while I was gone?"

"No master," Buzz said. "Everything stops when Your Eminence is absent. We've drug in a bunch of professors, doctors and every sort of scientist from biologist to astronomer. They're still going at it, but it's all we can do to convince one out of a hundred that we're serious

when we ask what a curse is. We've put a few dozen of them to work — supposedly — to research the subject. But nobody knows where to start. You can't get a hex into a laboratory. You can't measure it, weigh it, analyze it. Of the whole bunch we've turned up exactly one who believes hexes can happen."

"We have?" Ed said, surprised.

"A guy named Westbrook. All that worries me is, he's probably a twitch." Buzz threw his stogie into the wastebasket.

"Jim Westbrook? Oh, yeah, I'd forgotten I'd put a call for him to be picked up. Jim Westbrook's no twitch. He used to act as a panelist on my *Far Out Hour*. What has he come up with?"

"He's suggested that we draft the whole Parapsychology Department of Duke University, just as a beginning. Then he suggests we send to Common Europe, to the Vatican, in Rome, with a request for a team of their top exorcisers."

"Who in the devil needs exercise at a time like this?"

"Exorcisers, exorcisers. The archives of the Church probably contain more information on exorcising of evil spirits and such like than any other library in the world. Westbrook figures that taking off a hex is a related subject. He also suggests that we butter up Number One, in the Kremlin, and see if we can get into whatever archives remain of the Russian Orthodox Church, and also approach the Limes for any dope the Church of England might have back in some

lower bookshelves. All of them have the exorcising of evil spirits in their dogma."

Ed grunted wearily, "I suppose I ought to go and report to Hopkins, but if I know him and Braithgale, they'd keep me up half the night. Tubber gave me an earful of this program of his."

Helen finished her drink. "Father got hold of one of Tubber's pamphlets. He says that the path to Elysium is super-communism."

Buzz grunted, "Jensen Fontaine is about as competent of judging Zeke Tubber's program as a eunuch is the Miss American competition."

"Funnies we get," Ed complained. "At any rate, I'm too tired to think. What do you say we go to the apartment they've assigned me and have a few quick ones, then call it a night?"

Buzz fumbled for a fresh stogie, looking slightly embarrassed. "Uh, Little Ed . . ."

"Listen," Ed said. "I'm getting fed up with that handle. The next guy who calls me *Little Ed*, get awarded a fat lip."

Buzz De Kémp blinked at him. "Chum, you just don't sound like the old Lit . . . that is Ed Wonder, atall. Atall."

Helen said quickly, "I'm afraid we'll have to take a rain check, Ed. Buzz and I have a date for this evening."

Ed looked from one of them to the other. "Oh?" He scratched the end of his nose reflectively. "Well, good."

Helen said, as though in defense, "I figure even though I can't be a

clothes horse myself, anymore, possibly I can teach this bum to look more of a credit to his profession."

"You've got your work cut out for you, sister," Buzz leered at her. "I'm the type who can buy a two hundred dollar suit, and before I get out of the tailor shop I already look like I've slept in it."

"Funnies," Ed groaned. "Good night."

XXIV

He was about to sit down to breakfast and the morning paper when Colonel Fredric Williams came bustling in. Ed Wonder looked up at him.

"Special meeting in Mr. Hopkins' office, Wonder," he rapped.

"I haven't finished my breakfast."

"No time. Several important developments."

Ed rolled up the paper and stuck it into his jacket pocket, took a quick scalding sip of his coffee and came to his feet. "All right, let's go."

He followed the colonel from the suite. His two bodyguards, Johnson and Stevens, fell in behind them in the hall. There was the bureaucratic mind for you, Ed decided. Yesterday they had sent him up to Elysium, right into the camp of the supposed enemy, without a peashooter in the way of protection. But now, in this ultra-commission on the top of the New Woolworth Building, supposedly it wasn't safe for him to walk down the corridor unguarded.

Hopkins was not alone. In fact, his office was crowded. This time

Ed Wonder recognized almost all of them. Braithgale, General Crew, Buzz and Helen, Colonel Williams, and the more important members of Ed's Project Tubber team. Evidently, of all the different branches of investigation of the disasters, his project was rapidly gaining the ascendancy.

When they were seated, Hopkins turned a baleful eye on them, stressing Ed and Buzz De Kemp. He said, "Before we get to Mr. Wonder's report on his visit to Elysium, there are a couple of other developments. Mr. Oppenheimer?"

Bill Oppenheimer, who with Major Davis had originally upped Ed and Buzz to Crash Priority, came to his feet, jittering characteristically. He said, "To make it brief, very young children, all idiots and most morons, aren't affected."

"Aren't affected by what?" General Crew rumbled.

Oppenheimer looked at him. "By any of the hexes. They can even hear radio, see television." Bill Oppenheimer sat down.

Hopkins said, "Mr. Yardborough."

Cecil Yardborough came to his feet. "This is very preliminary. We've hardly started on this line, however, we should speed things up now that we've taken over the Parapsychology Department of Duke." He looked at Ed Wonder, as though expecting opposition to what he was about to say. "One of our researchers who's had considerable experience in ESP has suggested a scientific explanation for Tubber's power."

He couldn't have gotten more attention had he suddenly levitated.

Yardborough went on. "Our Doctor Jeffers suggests that Ezekiel Joshua Tubber has, probably unknowingly, developed telepathy beyond the point ever known before. Most telepathists can contact but one other person at a time, some can communicate with two or three, a very small number have been known to pass a thought on to a large number of persons within a limited distance." Yardborough's eyes swept around them. "Doctor Jeffers believes Tubber to be the first human being who can telepathically contact the whole species simultaneously, regardless of language."

Braithgale unfolded his long legs, recrossed them the other way. He said mildly, "What has that got to do with the hexes?"

Yardborough said, "That is but one half of the Jeffers' hypothesis. He is also of the opinion that Tubber is able to hypnotize through telepathy. That is, he doesn't have to be before the person hypnotized. He can be any distance away."

A sigh, as though of relief, drifted through the room.

"It doesn't hold up," Ed Wonder said flatly.

They turned to him, and there seemed to be glare in the expression of all, even Helen and Buzz.

He gestured with his hands, palms upward, "Okay. I know. Everybody wants it to hold up. People are built that way. They go batty if something comes along they can't label. They've simply got to have an explanation for everything. However, this Doctor Jeffers doesn't explain

Tubber's power. Sure, maybe I'd buy it for the TV-radio curse, and even the movie curse. It might even cover the juke box curse."

"Juke box curse!" somebody blurted.

Hopkins said evenly, "We've begun to receive reports of it. Go on, Mr. Wonder."

"However, it won't cover physical things Tubber's done, like sealing up the slots in parking meters, and setting a nightclub on fire with lightning because the proprietor was throwing shows involving teenage kids stripping. It wouldn't even cover breaking a set of guitar strings at a distance."

Jim Westbrook, seated off to one side, and noticed now by Ed Wonder for the first time, said, "Perhaps the fellow owning the guitar only *thought* the strings were broken, under Tubber's hypnosis." But the big consulting engineer didn't sound as though he believed it himself.

Ed said, "We simply don't know. Perhaps there's something in nature that when there's a need for a certain type of person the race produces him. Possibly nature figures that there's a need for a man with Tubber's powers right now. There was a need for a Newton when he came along. Can we explain him? There was a rash of super-geniuses in such cities as Florence at the time of the Renaissance. Can anybody explain the fantastic abilities of Leonardo and Michelangelo? Devil knows, the times called for them. The human race *had* to be pulled out of the Dark Ages."

Dwight Hopkins sighed and ran a gaunt hand over his mouth and chin. "Very well," he said. "However, Mr. Yardborough, see that Doctor Jeffers' line of investigation is continued. Crash priority. We leave no possibilities unexplored. The national emergency is growing geometrically."

"And now," Hopkins continued, "we come to another, very uncomfortable aspect. General Crew, please."

The general lumbered to his feet, and even before opening his mouth his face dyed mahogany. He took up a paper from Hopkins' desk and and shook it.

"Who is the traitor who leaked this whole story to A.P.-Reuters!"

"A. P.-Reuters!" Buzz ejaculated. "You mean I didn't get a beat on it? They can't do this to me!"

Ed Wonder snatched his own paper from his jacket pocket, ripped it open to the front page. It glared 72 point type.

TV-MOVIE-RADIO COLLAPSE
LAID TO RELIGIOUS LEADER

He didn't have to read it. He knew it would all be there.

"I thought nobody'd believe you," he snapped at the reporter.

Buzz grinned at him, took his stogie from his mouth and pointed at Ed's chest with it. "That's where my stroke of genius came in. This was my story, from the beginning, and I just had to see it in print. You left me in charge, yesterday. So I sent a couple of the boys up to Kingsburg and had them haul Old Ulcers right out of the city room and down here. I showed him

around. Showed him all the staff we've got working on Project Tubber. Finally it got through to him. Whether or not he believes it himself, the biggest story of the century cracked right in his own town. I had the piece already written up. He just took it with him."

"And A. P.-Reuters picked it up from the *Times-Tribune*, you kook!" Ed snarled at him. "You know what you've done?"

"I know what he's done," Hopkins said. "He's made a laughing stock of the administration. I thought it was made clear that this phase of our investigation was to be kept under wraps until more definite data was available."

Ed Wonder was on his feet, his face working. "He's done more than that. He's signed the death warrant of Tubber and his daughter."

Buzz scowled at him, defensively. "Don't be silly, chum. I didn't mention where they were. They're safely tucked away in the little Elysium hamlet of theirs. Sure, a lot of people might be sore at them. A good chance of teaching old Zeke a lesson. He'll find out what a heel practically everybody in the world figures he is."

Ed snarled, "He isn't in Elysium. He's in Oneonta, with that pint size revival tent of his, spreading the message. Come on, Buzz! You started this. Let's go. They'll lynch him."

Buzz threw his stogie on the floor. "Good grief," he muttered, heading for the door.

The general was standing too.

"Wait a minute. Perhaps this is for the best."

Ed Wonder flung a contemptuous glare at him, "Like that other brain storm of yours, getting a sniper to shoot him from a distance? Just consider two of the ramifications, soldier. One, suppose Tubber starts flinging hexes at a mob out to lynch him. Do you have any idea what they might consist of? Or, number two, suppose the crowd does get to him and finishes him off. Do you think his hexes end with his death? How do we know?"

Buzz was out the door and on his way through the outer offices. Ed started after him.

"Wait a minute," Dwight Hopkins called, his famed poise shot to hell. "I can phone the local police in Oneonta."

"No good," Ed called back over his shoulder. "Tubber and Nefertiti know me, but some heavy-handed cops might just intensify the fireworks."

In the anteroom, Johnson and Stevens hustled to their feet.

Ed ripped out at them, "Phone down to the garage. Have the fastest police car available ready for us, by the time we get there. Hurry, you flatfooted clowns!"

He charged down the corridor in the direction of the elevators.

Buzz had summoned one by the time he arrived. They hurried into it, banged the descent button, and their legs all but folded under them at the plunge.

The car was waiting. Ed flashed his identity and they hustled into the front seat. "How do you work

this damn thing?" Buzz demanded. "I've never had an automatic."

Ed Wonder had used Helen's General Ford Cyclones from time to time. He rapped, "Here," and dialed the number to take them across the George Washington Bridge. Meanwhile he snatched up the road map and located the coordinates for Oneonta. The up-State New York town wasn't a much greater distance than Kingsburg, but situated further west. They'd have to go to Binghamton, as the closest route.

XXV

They agonized along the way. It would be nearly noon before they arrived. They had no way of knowing where Tubber had set up his tent. They had no way of knowing how soon he would begin his lecture. If it was anything like Saugerties, it wouldn't be just one meeting scheduled, but several throughout the day. He'd possibly start quite early.

Ed Wonder didn't expect for him to get through the first talk. Once the audience found out who he was, that would be it. He cursed silently, inwardly. Perhaps they had already found out. Possibly the *Oneonta Star* had already run a notice. The *Star* was undoubtedly a subscriber to A. P.-Reuters; if some bright reporter connected the two stories and revealed that the controversial prophet was in town, it would mean the end already.

They could have saved themselves the anxiety over the time that would be taken locating Tubber's tent. From afar, the roar of the mob

could be heard. Throwing on the manual operation, Ed Wonder hit the lower part of town without diminution of speed.

"Hey, take it easy, chum," Buzz De Kemp blurted.

"A siren," Ed spit out at him. "There must be some button or something. Find it! This car'd have a siren."

Buzz fumbled. The siren's whine ululated, wave over wave. They shrilled through the small Catskill city, traffic pulling away, right and left. Such traffic as there was. Ed Wonder suspected that the greater part of the town was in on the show.

They could spot the action now. There was fire. As they pulled closer, they could see that it was obviously the tent.

All over again, it was the lynch scene of the movie projectionist in Kingsburg. Basically the same, though ten times over in size. Far beyond the point where it could have been controlled by the police.

The mob numbered thousands, roaring, shouting, shrilling, screaming. But here on the outskirts they were principally milling around, the crowd hampered by its very size, unable to see what was going on in the center. Ineffective in the developments.

From their height in the hovercar, Ed Wonder and Buzz De Kemp could make out the activity. In the dead center, Ezekiel Joshua Tubber and his daughter were being buffeted this way and that, framed in the light of the burning tent behind them. There was no sign of other

followers of the rejected prophet. Even in the excitement of the moment, Ed had a quick thought go through his mind. The desertion of Jesus, even by Peter, at the time of the betrayal to the Romans. Where were the followers, no matter how small a handful? Where were the pilgrims on the path to Elysium?

He slugged the lift lever, bringing them up to ten feet, shot toward the center of the shouting, club-brandishing mob. The smell of hate was everywhere. The fearful smell of hate and death, found seldom other than in mobs and in combat. The yells had become one, one blast of roaring rage.

Buzz yelled, "It's impossible. Let's get out of here. It's too late. They'll get us too!" The reporter's eyes were popping fear.

Ed banged toward the center of the melee.

He yelled at Buzz, "Take the wheel, it's on manual. Bring it down right above them!"

He squirmed over the seat into the back. He'd spotted something there earlier. Even as Buzz De Kemp grabbed at the wheel, steadying them, Ed tore the submachine gun from its rack.

"Hey!" the reporter yelled at him, still goggle-eyed.

With the butt, Ed Wonder knocked the glass out of the right rear window. The siren continued its screaming. The mob's leaders—a dozen of them, manhandling the bearded prophet, who seemed dazed, and Nefertiti, screaming and

scratching to get to her father—stared up. The siren was getting through to them for the first time.

Ed stuck the gun through the window, pointed up. He had never handled a similar weapon before. He pulled the trigger and the roar blasted back through the heavy hovercar, deafening him as he bucked the kick.

For the nonce, at least, it was effective. Below him, men scattered. He emptied the clip into the air.

"Down!" he yelled at Buzz.

"Don't be crazy! We can't . . ."

Ed leaned over the seat and knocked the lift lever up. Even before the limousine had hit earth, he had torn open the car door. He used the riot gun as a club, dashing for the staggering old man.

The sheer audacity of the attack was its success. Still swinging the heavy gun by its blisteringly hot barrel, he pulled and tugged the repudiated reformer toward and into the car's back seat. He spun and threatened the temporarily flabbergasted crowd with the submachine gun, as though it was still loaded, yelling, "Nefertiti!" He couldn't see her.

Buzz screamed, "Let's get out of here!"

"Shut up!" Ed roared.

She came crying and stumbling, her clothes half torn from her, through the ranks of the bewildered lynchers. Less than gently, Ed Wonder pushed her into the back seat, grabbed hold of the ascending vehicle. He felt a hand grab his foot. He kicked back and down. The hand let go and they were off.

"They'll be after us!" Buzz yelled back at him. "A thousand cars will be after us."

Everything went out of Ed Wonder. It was all he could do to keep from vomiting. He was trembling as with paroxysm of ague. "No they won't," he said, his voice shaking. "They'll be afraid of the gun. A mob is a mob. Brave enough to take on the killing of an old man and a girl. Not brave enough to face a sub-machine gun."

Nefertiti, still blubbering in hysteria, was working over her father. Getting him straight on the seat, at the same time trying to rearrange her own torn clothing.

Tubber made the first sound since the rescue. "They hate me," he said, dazed. "They hate me. They would have destroyed me."

Buzz De Kemp had at last shaken off his panic at the height of the excitement. "What'd you expect?" he grumbled. "An egg for your beer?"

They had a little difficulty in getting the torn and battered Tubber pair into the New Woolworth Building, but Ed had recovered by now. He glared the guards at the entry down, grabbed the phone and snapped, "General Crew. This is Crash priority. Wonder, speaking."

Crew came on in seconds.

Ed snapped. "I've got Tubber. We're coming up immediately. Have Dwight Hopkins ready in his office, and the top men on my staff. I want everybody who's informed on Project Tubber." He looked at the guards. "And, oh yeah, tell these

kooks to let us pass." He threw the phone to the armed guards, and started toward the elevator.

Buzz was supporting the elderly prophet at one side, Nefertiti from the other.

They went directly to the topmost floor.

Buzz said, "We ought to take them to your apartment. Miss Tubber is in bad enough shape, but the old boy is just short of being in shock."

"That's how we want him," Ed Wonder muttered lowly. "Come on."

Hopkins was at his desk, the others came hurrying in, one or two at a time.

Ed got the pathetic old man seated on a leather couch, Nefertiti next to him. The others stood, or took seats, staring at the cause of the crisis which was shaking the governments of every affluent nation on earth. At the moment, he didn't look as though he could have shaken a meeting of a small town Board of Education.

Ed said, "All right. Let me introduce Ezekiel Joshua Tubber, the Speaker of the Word. It's up to you gentlemen to convince him that his curses should be lifted." Ed sat his own self down, abruptly.

For a long moment there was silence.

Dwight Hopkins, his voice tense below the crisp efficiency, said, "Sir, as spokesman for President Everett MacFerson and the government of the United Welfare States of America, I can only plead with you to reverse whatever it is you have done — if, indeed, it was you — to bring

the nation to the brink of chaos where it now stands."

"Chaos," Tubber muttered, brokenly.

Braithgale said, "Three quarters of the population are spending the greater part of their time wandering aimlessly up and down the streets. It will take only a spark, and sparks are already beginning to fly."

Nefertiti said indignantly, glaring around at them, "My father is ill. We were almost killed. This is no time to badger him."

Dwight Hopkins looked at Ed Wonder questioningly. Ed shook his head, infinitesimally. Ezekiel Joshua Tubber was at bay, they would either come to terms with him now or anything might develop when he recovered strength and poise. It was brutal, perhaps, but the situation was brutal.

Ed said, explaining to the others. "Yesterday, Ezekiel Tubber explained part of his beliefs to me. His sect thinks the country is choking on its own fat and at the same time heading for destruction by using up its resources, both natural and human, at a headlong speed. He thinks we ought to plan a simpler, less frenetic society."

The dazed reformer looked up at him, shook his head in exhaustion. "That's not exactly the way I would have put it . . . loved one."

Jim Westbrook, slumped in a heavy chair, hands in pockets, said, dryly, "The trouble is, you've started at the wrong end. You've been trying to get to the people. Change their way of looking at things. The

fact is, friend, the people are slobs, and always have been. There hasn't been a period in history when, given the chance, the man in the street hasn't made a slob of himself. Given the license and freedom from reprisal, they'll wallow in sadism, debauchery, destruction. Look at the Romans and their games. Look at the Germans when they were given the go-ahead by the Nazis to eliminate the inferior races, the non-Aryans. Look at any combat soldiers, of any nationality."

Tubber shook his shaggy head, bear-like, and the faintest of the old spark was there. "You err, loved one," he protested, brokenly. "Human character is determined by environment rather than heredity. Human faults are imparted by bad training. The vices of the young spring not from nature, who is equally the kind and blameless mother of all her children; they derive from the defects of education."

It was Westbrook's turn to shake his head. "Sounds good, but it doesn't work out that way. You can't put more into a container than its capacity to hold. Average I.Q. is one hundred. Half the population is below that and you can subject most of them to education till hell cools off and it's not going to take."

The exhausted prophet was in there pitching. "No, your belief is a common fallacy. True, average I.Q. is one hundred, but actually few of us go more than ten points either above or below that figure. The moron is as seldom found amongst us as is the genius with his I.Q. of 140 or above. The less than

one percent who are geniuses are precious gifts to the race and should be sought out and given every opportunity to develop their talents, and cherished. Those who fall below 90 in their I.Q. are our unfortunates and every effort should be made, in all charity, to see that they lead as full lives as possible."

Dwight Hopkins said smoothly, "I thought your basic complaint was against our affluent society and the welfare state. But here you develop the usual do-gooder philosophy. All men are equal, so we should sacrifice the products of the successful to those who have lost the race."

Tubber brought himself up more erect. "Why are we so contemptuous of the so-called do-gooder? Is it so reprehensible to attempt to do good? Man would seem to be his own worst enemy. We all claim to desire peace, but at the same time sneer at the conscientious objector. We claim to desire a better world, and then sneer at those who suggest reform as do-gooders. But that is beside the question you ask. My objection to the welfare state and our present society is not that we have solved the problems of production, but that the machine has slipped beyond our control and runs amuck. I do not begrudge the productive person the product of his efforts. The right to products is exclusive, but the right to means should be common. This is so, not merely because raw materials are provided by the All-Mother, by nature, but also because of the heritage of installations and techniques

which is the real source of human wealth and because of the collaboration that makes each man's contribution so much more effective than if he worked in solitude. But this question of rewarding the more intelligent while penalizing he whom the All-Mother saw fit to equip with a lower I.Q. is no longer pertinent. In an economy of scarcity, it is obvious that the greatest contributors to society should reap greater rewards, but in our affluent society why should we begrudge anyone an abundance? We have never begrudged either air or water to our meanest criminal because there has always been an abundance of both. In the affluent society, the meanest citizen can have a decent home, the best of food, clothing and other necessities and even luxury. I would be a fool indeed, if I rallied against this."

General Crew rumbled, "What is this, a sermon? Let's get to the point. Does this man admit to—somehow or other—creating the disturbances that have hashed up what amounts to all our entertainment media? If so there should be laws that . . ."

"Shut up," Ed Wonder told him, without inflection.

The general looked at him unbelievingly, but obeyed orders.

Jim Westbrook said, "We got away from the original point. Our Ezekiel Tubber, here, believes that he can change the present admittedly chaotic society by changing the eternal slob who is the basic unit of society. He can't. I would think he would have seen reality when the

mob attacked him, as soon as they found it was he who robbed them of their idiot diversions."

Tubber had recovered enough to glare at him. "Your common man, as you called him before, has been made a slob, it is not inherent. My efforts have been to attempt to remove some of the devices that have been utilized to gouge out his brains. Almost any one of these slobs, as you call them, could have been, could still be, I contend, a worthy pilgrim along the path to Elysium. Suppose you took the child of a highly educated, well-to-do family, and, in the hospital, through a nurse's mistake, had it substituted for a slum child. Do you think for a moment that the slum child, in its new environment, wouldn't average out as well as his fellows? Or that the *good* family's off-spring, through mistake now being raised in the poorest part of town, wouldn't average out the same as *his* fellows?"

Nefertiti glared around at them. She said, "Father . . ." But then turned to Hopkins and then to Ed. "He's tired. He ought to have a doctor. Those people, they kicked him, hit him."

"The eternal slobs," Westbrook murmured, dryly.

Ed Wonder said, "Just one more minute, honey." He turned to Tubber. "All right, suppose we concede everything you've said, so far. Under the Welfare State the country is going to pot, and what we ought to do is change it the way you'd like to see it changed. But I want to remind you of something you said to me the

first time we talked together. I think I can remember it, almost exactly. I called you sir, and you said: *The term sir, a variation of sire, comes down to us from the feudalistic era. It reflects the relationship between noble and serf. My efforts are directed against such relationships, against all authority of one man over another. For I feel that whoever puts his hand on me to govern me is a usurper and a tyrant; I declare him to be my enemy.*"

"I fail to understand your point, loved one."

Ed pointed a finger at him. "You object to others controlling you, your thoughts, your actions. But that is exactly what you, with your power—whatever it is—have been doing to all the rest of us. *All* of us. You, the supposed do-gooder, to use that term again, are in fact the biggest tyrant of all history. Genghis Khan was a piker, Caesar an upstart, Napoleon, Hitler and Stalin small timers. Compared with . . ."

"Stop!" Tubber cried.

"What comes next?" Ed demanded, making his voice contemptuous. "Are you going to rob us of speech, so that we can't even complain against your decisions?"

Tubber looked at him, the Lincolnesque sadness there as never before, the hurt manifest.

"I . . . I didn't know. I . . . thought . . ."

Dwight Hopkins moved in smoothly. "I suggest a compromise, sir, ah, that is, Ezekiel. You for all your efforts have failed to bring your message—whatever its merits or lack of them—to the people whom you

love but who have thus far rejected you. Very well, my compromise is this. That for one hour each day you shall be on the air. On every TV and radio throughout the world. There shall be, for that hour, no other programs to compete with you. This one hour a day shall be yours, so long as you wish it."

Both Nefertiti and her prophet father were staring at him.

"And . . . in return?" Tubber wavered.

"In return, all your, ah, hexes, shall be lifted."

The shaken prophet hesitated. "Even though I were on the air each day, perhaps they would not listen."

Buzz De Kemp chuckled around his stogie. "That's no problem, Zeke, old chum. One more hex. Your very last one, you should promise. A hex urging everyone to listen. Not necessarily to believe in your program, but merely to listen."

"I . . . I don't even know if it is possible to reverse . . ."

"We can try," Dwight Hopkins urged smoothly.

General Crew said, "Come to think of it, I have three daughters. Since that curse against cosmetics and vanity, life has been more bearable. I can even get into the bathroom in the morning. Couldn't we just retain that one?"

"The one against juke boxes," Braithgale murmured. "I loathe juke boxes."

"My own pet peeve," Buzz said, rolling his stogie from one side of his mouth to the other, "is comic books. I'd say . . ."

Jim Westbrook laughed suddenly.

"For my books, friend, you can keep the hex on radio and TV."

Dwight Hopkins glared at them. "That will be all of this nonsense, gentlemen."

The elderly prophet took a deep breath.

"Now verily do I say . . ."

XXVI

Ed Wonder, assistant producer of WAN-TV, came bustling into the general offices of the station. He tipped a wink to Dolly.

"Nice hair-do you've got there."

"Thanks, Lit . . . uh, that is Mr. Wonder."

Ed grinned at her. "That reminds me. You might take a cold cloth back to Jerry in the control room of Studio Three. He's got a bloody nose. That boy'll never learn my name."

Dolly began to come to her feet. "Mrs. Wonder is in your office," she said.

"Fine," Ed told her. He headed for his private office.

Nefertiti was standing at the window when he came in. She turned around.

Ed took her hands and held back from her, pretending to consider the new dress critically. "Shopping again, eh? Darling you were meant to be a clothes horse."

"Isn't it wonderful! Oh, Ed, I almost forgot. There's a cable from Buzz and Helen. They're in Bermuda."

"The honeymooners, eh?"

The intercom on the desk lit and Dolly said, "Mr. Fontaine is in Mr.

Mulligan's office, Mr. Wonder. He wants to see you."

Ed kissed his bride. "Hold on, honey. I'll be back shortly and take you to lunch."

He headed for Mulligan's office, wondering what Fontaine wanted now.

Jensen Fontaine glared up at him from the desk. Fatso Mulligan wasn't present.

"What's the crisis, sir?" Ed said, sitting down and reaching for a cigarette.

"It's that blasted communist, Tubber!"

"My father-in-law isn't a communist, Mr. Fontaine. Get Buzzo to fill you in on that some time. Among the other proof is the fact that it took a lot of arm twisting on the part of the Reunited Nations to get the Soviet Complex to agree to allow him time on their stations."

"I say he's subversive! Why I ever let you talk me into using our station as the origin of his world-wide broadcasts, I'll never know!"

Ed said easily, lighting his smoke and flicking the match to the ashtray on the desk, "Gives us a lot of prestige, for one thing. And the time immediately before and after Josh's hour is worth its weight in emeralds. Business is booming. Everybody's happy."

"But he's spreading that con-founded blasted subversive message of his to every man, woman and child who can get to a TV or radio set."

"That was the deal," Ed said reasonably. "Dwight Hopkins had

his work cut out getting everyone to agree.

Jensen Fontaine pounded a scrawny hand on the desk. "You still don't understand," he cried. He pointed dramatically to a pile of mailbags stacked in one corner. "Letters. Letters from every country on earth. It's bad enough that this ultra-radical spews out his underground . . ."

"Hardly underground," Ed murmured.

". . . subversion in English, but they translate it in every country."

"Part of the agreement," Ed said reasonably.

Fontaine looked as though he was about to blow a gasket. "Is it impossible to get through to you, Ed Wonder! Don't you realize what that ass Dwight Hopkins and those communists down in Greater Washington have done."

Ed's eyebrows went up. "I thought I did," he said. "They've given my father-in-law the chance to put his message on the air."

"Yes! But didn't they consider the possible results?"

Ed looked at him questioningly. The station owner dramatically pointed to the mail sacks. "Those letters are running ten to one in favor of Tubber's program. Don't you understand? They're beginning to believe in him."

"Holy smokes," Ed said.

"Have you seen the public opinion polls? People are beginning to follow this . . . this . . . madman. At the rate we're going, by next election he could vote in this Elysium nonsense of his!"

"Holy smokes," Ed said. END

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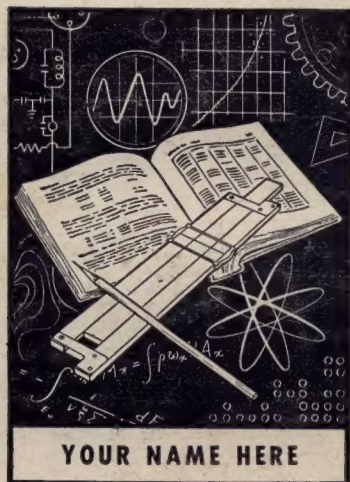
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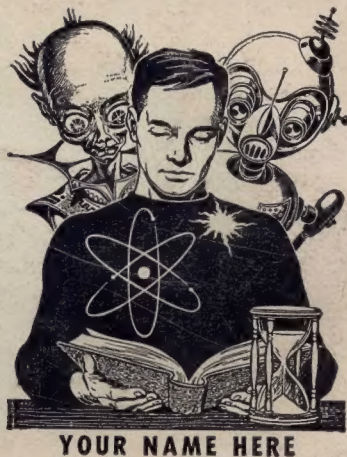
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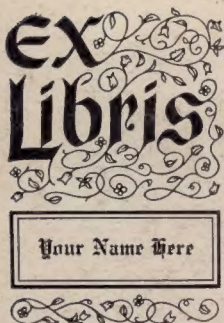
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